

AUSTIN ENERGY'S TARIFF PACKAGE: §  
2015 COST OF SERVICE § BEFORE THE CITY OF AUSTIN  
STUDY AND PROPOSAL TO CHANGE § IMPARTIAL HEARING EXAMINER  
BASE ELECTRIC RATES §

**AUSTIN ENERGY'S RESPONSE TO AE LOW INCOME CUSTOMERS'  
FIRST REQUEST FOR INFORMATION**

Austin Energy ("Austin Energy" or "AE") files this Response to AE Low Income Customers a/k/a Texas Legal Services Center's ("TLSC") First Request for Information. The discovery request was submitted by AELIC on February 11, 2016. These responses are timely filed on February 22, 2016 in accordance with the City of Austin Procedural Rules for the Initial Review of Austin Energy's Rates, § 7.3(c)(1).

Respectfully submitted,

**LLOYD GOSSELINK ROCHELLE &  
TOWNSEND, P.C.**

816 Congress Avenue, Suite 1900

Austin, Texas 78701

(512) 322-5800

(512) 472-0532 (Fax)

tbrocato@lglawfirm.com

hwilchar@lglawfirm.com

THOMAS L. BROCATO

State Bar No. 03039030

HANNAH M. WILCHAR

State Bar No. 24088631

**ATTORNEYS FOR AUSTIN ENERGY**

**CERTIFICATE OF SERVICE**

I hereby certify that a true and correct copy of this pleading has been served on all parties and the Impartial Hearing Examiner on this 22nd day of February, 2016, in accordance with the City of Austin Procedural Rules for the Initial Review of Austin Energy's Rates.

THOMAS L. BROCATO

AUSTIN ENERGY  
2016 FEB 22 PM 1:21

TLSC 1-1. Please identify each witness Austin Energy is intending to call at the hearing before the Impartial Hearing Examiner for direct examination.

ANSWER:

Please see Austin Energy's Response to NXP/Samsung RFI No. 1-9.

Prepared by: BE  
Sponsored by: Mark Dreyfus

TLSC 1-2. For each witness identified or referenced in RFI No. 1-1, please provide the following:

- a. The location(s) of the rate filing package the witness is sponsoring (please identify the portions by date stamp and by named reference);
- b. A resume of the witness which includes business address, including telephone contact information; list of testimonies presented that includes the jurisdiction and reference number of proceedings (such as docket number or case number filing), the date the testimony was presented, the nature of the testimony (such as testimony addressed cost of service, or reserves, etc.); the experience and training of the witness; the education of the witness; a list of publications the witness issued either individually or in partnership with other individuals that includes the jurisdiction, any reference number of proceeding, if any, the nature of the publication, the date of the publication;
- c. Copies of any communications between the witness and Austin Energy, its other witnesses, its rate consultants, employees (including general manager, managers, and officials), and agents relating to the substantive matters in the rate filing package since AE determined that a rate case would be filed.

ANSWER:

- a. Please see Austin Energy's Response to NXP/Samsung's RFI No. 1-9.
- b. Please see Attachment 1 for the requested information.
- c. By agreement of the parties, Austin Energy will be responding to this question on February 24.

Attachment 1 –Austin Energy's Executive Staff Resumes

Prepared by: BE  
Sponsored by: Mark Dreyfus

Elaina Ball

721 Barton Springs Road, Austin, Texas 78704-1145

512-322-6015

Testimonies presented in rate proceedings: None

Experience/Training/Education

Education

University of Texas – Austin, Texas, 1994-1998, B.S. Chemical Engineering, minor study Environmental Engineering

University of Idaho – Moscow, Idaho, 2008 Utility Executive Course

Skills/certifications

Six Sigma Black Belt, Certifications in Lean Warehousing, Value Stream Mapping, Toyota Production System, Strategy Deployment (Hoshin Kanri), Theory of Constraints, Certified Rapid Action Coach & Trainer, Certified Prosci Change Management Trainer, APICS Supply Chain Management, GIS, SAP, Maximo, BI/BW, Minitab

Experience

Austin Energy Austin, TX (2012-present)

Interim Chief Operating Officer

In an interim capacity, responsible for operations at Austin Energy, including generation, transmission, distribution, market operations, environmental services, IT, onsite energy services, and reliability compliance for the utility.

Vice President Power Production

Responsible for 2534 MW natural gas, nuclear and coal generation. Serve in executive leadership joint project roles with nuclear and coal generation partners. Responsible for day to day operations of natural gas assets, engineering and project management functions for power production.

Power Plant Manager

Responsible for 926 MW of steam and aero-derivative natural gas generation at the Decker Creek Power Station.



## CPS Energy-San Antonio, TX (2006-2012)

### Vice President-Technical Services & Energy Solutions

Led a 300+ member team of engineers, researchers, designers, information technology professionals, and technicians responsible for approximately \$240M annual electric distribution, substation, and transmission design. Responsible for corporate applied research and deployment of energy management, demand response, smart grid programs for all customer segments.

### Sr. Director-Supply Chain, IT, & Enterprise Asset Management

Led a 500+ member team of supply chain, information technology, facilities and operations staff providing shared service support to the organization. Responsible for procurement, asset management, fleet services, information technology, fiber/wireless communications, materials management for the utility.

### Director-Supply Chain

Led 200+ member team of supply chain and fleet staff responsible for procurement, warehousing, distribution of materials/services as well as fleet acquisition and maintenance for the organization.

### Process Improvement Analyst

Provided process improvement facilitation/support for teams in power generation and supply chain-focused on water chemistry, reliability centered maintenance, contract management and inventory management.

Publications from rate proceedings: None

Mark V. Dombroski  
Austin Energy  
721 Barton Springs Road  
Austin, Texas 78704  
(512) 322-6148

### **Relevant Experience**

Austin Energy, Jan. 2016 - Present: Interim General Manager

Austin Energy, Oct. 2014 - Present: Chief Financial Officer and Senior Vice President for Corporate Services

The Rehancement Group, Inc. 2009-2014: Vice President. Provided consulting and advisory services related to energy and utility matters.

City of Bainbridge Island, WA 2008-2009: City Manager. Served as Chief Executive Officer for a full service municipality.

Seattle City Light, 2005 – 2008: Economist, Director of Finance. Responsible for budget, rates, financial forecasting and corporate performance of the municipally-owned utility.

Sigma Squared Analytics, 2002 – 2005: Principal. Provided consulting and advisory services related to energy and utility matters.

KPMG, LLP/KPMG Consulting, 1995 – 2002: Senior Consultant/ Manager/ Senior Manager, Corporate Transactions, Energy Power and Natural Resources, Asset Solutions. Provided consulting and advisory services related to energy and utility matters.

Price Waterhouse, LLP, 1992 – 1995: Consultant, Corporate Finance, Dispute Analysis and Corporate Recovery. Provided consulting and advisory services related to energy and utility matters.

### **Relevant Education, Training and Certifications**

Seattle University, Master of Public Administration

University of Texas at Dallas, Bachelor of Arts and Humanities

Association of Energy Engineers, Certified Energy Manager #18785

Association of Energy Engineers, Certified Demand-Side Management Professional #1447

NERA Economic Consulting, Marginal Costing for Electric Utilities

University of North Texas Professional Development Institute, Certificate in Petroleum Accounting and Joint Interest Auditing

**Relevant Testimony or Publications**

None

## Mark K. Dreyfus

721 Barton Springs Road  
Austin, TX 78704  
(512) 322-6544 (o)  
mark.dreyfus@austinenenergy.com

### PROFESSIONAL EXPERIENCE

#### Austin Energy

2012- current *Vice President of Regulatory Affairs & Corporate Communications:*

2008 - 2012 *Director of Regulatory & Government Affairs:*

Direct Austin Energy staff in the areas of *Market Policy and Planning, Local Government Issues, Governmental Relations, Public Information, and Marketing Communications.*

#### Primary Responsibilities:

- Develop Austin Energy's strategic regulatory program, covering federal, state, and city regulatory policies.
- Manage Austin Energy's participation and advocacy before the Texas Legislature.
- Manage Austin Energy's participation in state regulatory agency proceedings and before the Electric Reliability Council of Texas (ERCOT).
- Oversee Austin Energy's support of and preparation for City Council meetings, Council requests, and in the coordination and facilitation of the Electric Utility Commission and the Resource Management Commission.
- Develop and execute Austin Energy's corporate communications strategy.
- Oversee marketing of Austin Energy's energy efficiency and distributed solar programs.

#### Primary Accomplishments:

- Successfully led three year effort before City Council and on appeal before the Public Utility Commission of Texas for approval of first electric base rate increase in 18 years.
- Led Austin Energy through multiple legislative sessions in which legislation directly addressed the City of Austin's ability to manage its utility locally.
- Serve as a member of the ERCOT Board of Directors (2010 to current).
  - Finance and Audit Committee (2010 to 2011).
  - Human Resources and Governance Committee (2012 to current).
  - Key participant in hiring ERCOT CEO (2010).
  - *Ad hoc* Emergency Communications Committee following February 2011 outages.
- Served as member of the TRE Board of Directors (2010).

2001 - 2008 *Director of Market Policy and Planning:*

1999 - 2001 *Utility Strategic Policy Analyst:*

Develop policy initiatives and advise the General Manager and Executive Team on market and regulatory issues before the Public Utility Commission of Texas (PUC) and the Electric Reliability Council of Texas (ERCOT).

## Mark K. Dreyfus

### Primary Responsibilities:

- Coordinate staff participation and policy activities at the PUC and ERCOT.
- Represent Austin Energy on ERCOT committees and task forces and before the Public Utility Commission.
- Prepare and coordinate comments submitted to the PUC on proposed rules and contested issues.
- Research and draft documents and make oral presentations to Austin Energy management, regulatory bodies, customers, and the City Council of Austin.

### Primary Accomplishments:

- Managed/directed Austin Energy's effort to prepare for and convert systems and processes to participate in the competitive wholesale market, which opened in summer of 2001.
- Active member of 1999-2001 ERCOT Protocols development task forces and subsequent ERCOT nodal market redesign process.
- Chair of ERCOT's Technical Advisory Committee (Chair 2007 – 2008; Vice Chair 2004 – 2006).
- Member of the Board of Directors of the Texas Renewable Energy Industry Association (2007 – 2010).
- Member of ERCOT's Retail Markets Subcommittee (2002).
- Extensive public speaking and community outreach on electricity competition and market redesign.

## PUBLIC UTILITY COMMISSION OF TEXAS

1998-1999     *Advisor to Commissioner Judy Walsh*  
*Advisor to Commissioner Pat Curran:* Advised the Commissioner on all electric and telecommunications policy issues before the Public Utility Commission.

### Primary Responsibilities:

- Served as the Commissioner's liaison with stakeholders from the electric and telecommunication industries, cooperatives, municipalities, new market entrants, and environmental and consumer organizations.
- Designed legislative strategies, tracked legislation, and coordinated with legislative staff, including work on Senate Bill 7, which led to the adoption of open access and retail competition in Texas.
- Analyzed the future structure and character of the electric and telecommunications industries.
- Reviewed and commented on staff work products, rules, and reports.
- Prepared the Commissioner for speeches, public hearings, and open meetings.

1996-1998     *Chief Economist, Office of Policy Development:* Briefed and advised the commissioners on matters of policy and economics in contested cases and rulemakings affecting the electric and telecommunications industries; directed team members on special projects and report preparation.

## Mark K. Dreyfus

### Primary Accomplishments:

- As team leader and lead author, managed an interdisciplinary team of over 15 staff members in preparing a year-long analysis of electric industry restructuring, culminating in a three-volume report to the 75<sup>th</sup> Texas Legislature: *Electric Power Industry, Scope of Competition and Potentially Strandable Investment (ECOM) Report*.
- Organized numerous public workshops on electric industry restructuring, wholesale electric markets, low-income programs, and affiliate relationships.
- Co-lead (until shift to the Commissioner's office) on three reports to the Interim Senate Committee on Electric Restructuring: *1998 ECOM Update; Low-income and Environmental Programs of Texas Electric Utilities; 1999 Scope of Competition in the Electric Utility Industry in Texas*.
- Extensive public speaking, instruction, and outreach on competition issues.

### NATIONAL ECONOMIC RESEARCH ASSOCIATES, INC.

1993-1996     *Senior Analyst:* Drafted testimony for senior consultants. Researched and prepared reports on economic issues affecting the electric utility industry, including: electricity competition, emissions trading programs, the social costs of energy consumption, the economics of climate change, economic and environmental consequences of electric utility planning, and the economics of demand-side management. Responsible for day-to-day client contact on consulting projects. Supervised analysts and researchers in studies and testimony preparation.

### U.S. ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF TOXIC SUBSTANCES

1987-1989     *Section Chief/Supervisory Economist:* Managed staff economists in all existing chemical programs under the Toxic Substances Control Act.

- Supervised senior policy analysts, economists, and support staff.
- Managed multi-year, mission-support contracts.
- Trained junior economists and regulatory impact analysts.
- Planned annual budget for existing chemicals programs.
- Served as acting Branch Chief/Supervisor.

1984-1987     *Economist:* Analyzed chemical industry markets to assess the effects of regulations on competitiveness and to identify the differential impacts of regulations on market segments and firms. Conducted benefit-cost and regulatory impact analyses for existing chemical actions under the Toxic Substances Control Act, including information collection requirements, chemical testing programs, manufacturing controls, and product use restrictions.

### U.S. DEPARTMENT OF TRANSPORTATION, TRANSPORTATION SYSTEM CENTER

1983     *Program Analyst:* Performed econometric analyses for auto safety programs and provided policy support for waste disposal, spill, and transportation issues. Designed and implemented a seatbelt enhancement pilot program that achieved greater than a 100 percent improvement—over the long-term—in seatbelt usage.

## Mark K. Dreyfus

### EDUCATION

DUKE UNIVERSITY

Ph. D. in Economics, 1993

Fields: Public Finance and Environmental Economics

Dissertation: *Consumer Discounting Behavior and the Value of a Statistical Life Revealed in Household Automobile Holdings.*

HARVARD UNIVERSITY, JOHN F. KENNEDY SCHOOL OF GOVERNMENT

M.P.P. (Master of Public Policy), 1984

Concentration: Transportation Policy and Planning

UNIVERSITY OF TEXAS

B. A. in Economics (Plan II), 1982

## Mark K. Dreyfus

### Prior Testimony before the Public Utility Commission of Texas

PUC Docket No. 24770, *Report of ERCOT to the PUC Regarding Implementation of the ERCOT Protocols*, July 19, 2002.

PUC Docket No. 40627, *Direct Testimony of Mark K. Dreyfus on Behalf of the City of Austin D/B/A Austin Energy*, November 1, 2012.

PUC Docket No. 40627, *Rebuttal Testimony of Mark K. Dreyfus*, February 22, 2013.



## DEBORAH L. KIMBERLY

Austin Energy  
721 Barton Springs Road  
Austin, Texas 78704

Phone: 512-322-6327

debbie.kimberly@austinenergy.com

### Summary

Multi-disciplinary, results-driven manager with over 30 years of experience in utility management, strategic planning, finance, sustainability, communications, marketing and public policy.

### Experience

#### **2013 – Present                      Austin Energy                      Austin, TX** **Vice President, Customer Energy Solutions**

- Responsible for management and oversight of energy efficiency and demand response programs, distributed solar and other renewable technologies, green building program, advanced transportation technologies, key accounts relationships data analytics and market research.
- Leading development of first community solar offering.
- Led teams that successfully secured state and federal grants for smart grid demonstration projects and transportation initiatives.
- Facilitated development and implementation of marketing and outreach plans for customer programs.
- Supported stakeholder and community engagement groups.

#### **2006-2012                      Salt River Project                      Tempe, AZ** **Director, Customer Programs & Marketing (2011-2012)**

- Provided direction to departmental managers responsible for administering \$60 million annual portfolio of energy efficiency and demand response programs.
- Developed and launched comprehensive corporate marketing campaigns for all energy efficiency, demand response, renewable and water conservation programs. Managed corporate events and sponsorships.

#### **Manager, Energy Efficiency & Policy Analysis (2008 - 2011)**

- Developed and staffed corporate demand side management function, introducing 25 new products and services. Functions included product development, market research, marketing and measurement & evaluation.
- Managed public stakeholder process to review and amend Sustainable Portfolio principles and secured SRP Board of Directors approval of such.
- Led policy analysts in reviewing and formulating company positions on legislative and regulatory initiatives, with emphasis on finance, climate, renewable/energy efficiency standards, EPA rules and other related policy matters.
- Oversaw and coordinated activities related to SRP's Sustainable Portfolio.

#### **Senior Principal Planning Analyst (2006 - 2008)**

- Coordinated analysis of SRP's Sustainable Portfolio; developed inventory of environmental stewardship initiatives.
- Provided policy and planning support to various internal organizations.

#### **1998–2006                      Consultant                      Scottsdale, AZ**

- Consulting and public affairs advisor to SRP and the Large Public Power Council in support of successful legislative and regulatory redress of public power tax and finance restrictions.
- Assisted in leading SRP recapitalization project to address private use constraints.
- Provided direction and assistance with various budget, performance measurement and economic development projects.

- Facilitated meetings for local Boards, including the Superstition Vistas Steering Committee and the Athena Award Selection Committee.

**1982–1998                      Salt River Project                      Tempe, AZ**  
**Manager, Financial Services    (1994 – 1998)**

- Managed Corporate Pricing, Treasurer's Office, Financial Planning, Budget, Accounting and Corporate Tax functions.
- Performed corporate leadership responsibilities during electricity restructuring process.
- Managed relationships with financial advisors, bankers, bond and tax counsel, auditors and investors.

**Manager, Special Projects    (1991 – 1994)**

- Assisted SRP Associate General Manager & Chief Financial Executive in a variety of supervisory, communications and analytical projects.

**Budget Supervisor    (1989 – 1991)**

- Developed corporate capital and O&M budgets.
- Formulated, implemented and communicated corporate financial policies.

**Supervisor, Financial Planning & Funds Administration    (1985 - 1989)**

- Invested, monitored and administered employee benefit assets.
- Updated and managed to investment policies.
- Managed trust, investment and actuarial relationships.

**Treasury Analyst    (1983 - 1985)**

- Invested working funds and administered commercial paper program.
- Amended benefit plans to ensure post-ERISA compliance.

**Benefits Analyst    (1982 - 1983)**

- Administered, communicated & designed enhancements to executive capital accumulation plans; advised executives on benefits decisions.
- Assisted in implementation of SRP's first 401(k) savings plan.

**1980 – 1981      London & Manchester Assurance Co.,                      Exeter, Devon, England**  
**Pension Administrator**

**1978 - 1980      Prudential Insurance Company                      Los Angeles, CA**  
**Management Trainee, Group Benefits**

**Education**

**1981 - 1982      Thunderbird School of Global Management                      Glendale, AZ**  
▪ Masters, International Management

**1974 – 1978                      Stanford University                      Stanford, CA**  
▪ B.A., International Relations

**Interests &  
Community  
Involvement**

Board member: South Central Partnership for Energy Efficiency as a Resource (Treasurer), Association of Women in Energy, Pecan Street Research; Member: EPRI Power Delivery Unit Sector Council; past Board member: Maricopa Health Foundation; Charter board member, Desert Foothills Habitat for Humanity; Past Large Public Council Treasurer and Chair, Tax and Finance Task Force, various congregational leadership positions.

## Kerry L. Overton

721 Barton Springs Road, Austin, Texas 78704

(512) 322-6113

kerry.overton@austinenergy.com

### **Summary**

Over 29 years of experience in the electric and oil & gas industry. A highly effective leader with over 22 years of executive experience. Extensive and direct expertise in all aspects of corporate leadership within a governmental enterprise operation. Facilitated operational efforts which required integrated work with all customer classes, commissions, city council, advocacy groups, union associations, vendors, city departments and employees. Experienced utility visionary providing strategic leadership, exemplary customer service, operational reliability, best practices and balance. Innovative business leader who drives results with quality decisions. Promoter of customer and employee engagement.

### **Professional Experience**

#### **City of Austin**

#### **Austin Energy, Austin, Texas**

**2000 - present**

#### ***Deputy General Manager, Corporate Shared Services (2008 – present)***

Direct the operation of over 586 professional and administrative staff with an annual O&M budget of \$71 million and CIP budget of \$90 million. Provides oversight to customer billing operations generating over \$1.3 billion in revenues. Manage the utility's Customer Care and Human Capital Management operations (including Corporate Information Technology & Telecommunication business units for approximately four years).

Responsible for the policy development and program implementation for integrated technology, customer services and workforce planning for city-wide departments and internal business units including Power Generation, Electric Service Delivery, Distributed Energy Services and Finance & Corporate Services. Develop policy and programs associated with customer service activity for Austin Energy, Austin Water Utility, Solid Waste Services, Public Works and Watershed Protection. Strategic oversight and management responsibility includes policy development, operational management, systems innovation and program development. Established policy direction and actively resolved priority challenges essential to the organization. Critical service areas to the corporation include: Human Resources, Organizational Development, Workforce Planning, Facilities Management, Corporate Quality Services, Health & Safety, Security Management, Customer Account Management & Billing, Field Services, Utility Contact Center, City-Wide 311 Information Center, and Information Technology & Telecommunications.

- In collaboration with the Executive Leadership team launched the organization's most comprehensive talent management initiative.
- Provided Executive over-sight in the creation of the Utility's comprehensive Facilities Master Plan.
- Served as Risk Oversight Committee (ROC) member governing our energy resources.
- Instrumental in the cross-departmental integration of Advanced Meter Infrastructure (AMI) and the Customer Information System (CIS).
- Leading the replacement of the legacy CIS for the new Customer Care & Billing system.
- As the Utility's Privacy Officer, develop policy and procedures for city-wide compliance with the Fair and Accurate Credit Transactions Act (FACTA).
- Assisted the City's Purchasing Office, Small & Minority Business Resources Department and the Community at-large in improving the utility's performance related to M/WBE goals.
- Executive Sponsor of the Corporate Diversity Initiative.

***Sr. Vice President, Customer Care and Market Research Planning & Development (2005 – 2008)***

Directed the operation of 383 professional and administrative staff with an annual O&M budget of \$32 million and CIP budget of \$20 million. Managed the operation responsible for the utility's key accounts, commercial and residential call centers, customer billing, account receivables, market research and the City's 311 Information Center and the Quality Management & Training Support group.

- Assisted in operational improvements which resulted in the Corporate Customer Satisfaction Score increasing the annual index score four points from 78 to 82 as measured by the American Customer Satisfaction Index and Creative Consumer Research.
- Collaborated with all customer class stakeholders to improve customer online automation services and customer-facing portals, including the Multi-family and Key Accounts Portals.
- Facilitated the development and implementation of the Revenue Measurement Field Services Mobil Workforce Initiative which improved KPIs 30-40%.
- Active in the development of a state-of-art Field Services training facility improving employee safety and work order execution time.
- Improved the handling of customer calls in power outages and emergency restoration efforts.
- Spear-headed the development of the Customer Care ISO 9001:2008 registry.

***Vice President, Customer Care and Market Research Planning & Development (2002 –2005)***

Directed an annual operation budget of \$35 million, in addition to, approximately 330 professional and administrative staff. Managed key accounts, market research, call center operations, billing, field service meter reading activities, customer account management and timely collections of approximately \$1.3 million in annual utility revenue. A key component of this operation included managing the customer billing cycle and customer relations management on transactions for over 480K customer accounts receiving city-wide services. Directed the operations of a nationally recognized Key Accounts program, which promoted and enhanced Austin Energy's relationship with the top 200 revenue customers (including Dell, Samsung, IBM, and Motorola). Responsibilities included directing, developing, and implementing customer service quality standards and measurement systems for the residential and commercial call centers and other customer related transactions. Oversight of the marketing and service execution of the city's conservation programs and services including Green Choice, AE's Weatherization program, Water & Wastewater programs, Solid Waste Services Cart Management, and more.

- Expanded the discount offerings and services for the utility's Customer Assistance Program.
- Designed and implemented comprehensive process improvement initiatives and automation projects which enhanced the processing time 75% in the meter-to-cash activities.
- Developed operational policies improving utility customer service regulations as adopted by City Council.
- Created a best-in-class remittance processing unit and improved processing by 80%.
- Reduced outstanding debt for inactive utility accounts from 1.78% to .23%, yielding an annual increase in total revenue recovery in excess of \$15 million.
- Integral in the planning, procurement and implementation of the newly created City-Wide 311 Information Center.

***Director, Infrastructure Support Services (COA) (2001 – 2002)***

Directed integrated Financial Management and Human Resource Services for multiple city departments. Led the policy development and analytical reviews for Public Works, Transportation, Watershed Protection, Planning and Development Review and Economic Growth & Redevelopment Services. Highly skilled in financial analysis, budget preparation, employee relations, compensation, training and personnel policies.

- Created the operational and capital improvement budgets for cross-functional departments.
- Developed and promoted best practices in financial services.
- Executed and monitored the human resources policy for cross-functional departments.
- Managed the strategic and tactical planning for multiple cross-functional departments.

***Process Manager, Customer Care (2001)***

***Sr. Business Process Consultant (2000)***

Developed and implemented a methodology for strategic planning, performance measurement, and process improvement. Generated risk analysis and contract management reviews for multiple business units. Developed short and long-term process improvement plans for remittance processing. Implemented project management methodology for revenue controls. Advised and consulted the Sr. Vice President of Customer Care on revenue system infrastructure.

- Managed project schedule, cost, and quality production for business improvement initiative.
- Reduced utility payment backlog and improved reconciliation process with corporate accounting.
- Increased revenue bank deposits.

**State of Texas**

**Texas General Land Office, Austin, Texas**

**1987 – 1999**

***Deputy Commissioner, Energy Resources (1996 – 1999)***

Provided leadership to 85 professionals and administrative staff with an annual operation budget of \$3.2 million. Managed a staff of Engineers, Geologists, Energy Marketers, Revenue Managers, GIS Specialists and Auditors responsible for the Minerals Leasing, Royalty Management, Royalty Audit and Energy Marketing Divisions. Directed and oversaw the management of the State of Texas' mineral assets including 12.5 million acres of state land dedicated to the Permanent School Fund. Directed program area operations which negotiated mineral leases, conducted semi-annual lease sales, and performed accounting and auditing of state leases to ensure state receipt of all production revenue. These activities produced annual incomes of approximately \$150 million for the Permanent School Fund which helped finance public education. The fund is valued at well over \$14 billion. Managerial responsibility also included the in-kind oil and gas program of which the Land Office obtains oil/gas in lieu of royalties.

- Improved the Engineering operational standards.
- Integrated legacy Land Management, Revenue Management and GIS automation systems.
- Increased royalty lease revenue 15-20%.
- Promoted policy changes which increased the eligibility and participation of small/minority energy marketers.

***Associate Deputy Commissioner, Energy Resources (1993 – 1996)***

Assisted and directed the Energy Resources operational staff of Engineers, Geologists, Energy Marketers, Revenue Managers, GIS Specialists and Auditors responsible for the Minerals Leasing, Royalty Management, Royalty Audit and Energy Marketing Divisions. Oversaw program area operating budget, legislative reporting requirements, performance measures and program area output objectives. Led the project improvement and quality initiative of Energy Resources increasing operational efficiency, redirecting staff to critical functions, and improving automated systems to increase royalty collections and compliance.

- Improved relations with integrated oil & gas production and distribution companies operating on State lands.
- Created synergistic and cooperative agreements with the Federal Department of Energy and Department of Interior's Minerals Management division improving joint off-shore production.
- Formed joint Legislative Stakeholder committees creating energy related policy recommendations for adoption.

***Executive Assistant, Commissioner's Office (1990 – 1993)***

Advised Commissioner on all legislative initiatives. Legislative specialty included small/minority business development, economic development, alternative fuels, plastic recycling and coastal management planning.

- Launched the agency's first clean-fuels natural gas transportation program.
- Drafted legislative policy recommendations to promote economic and environmental issues critical to the Land Office program initiatives.

***Director, Revenue Processing (Texas Veterans Land Board) (1989 – 1990)***

Directed staff of 18 professionals with an annual operating budget of approximately \$1 million. Assisted in the management of the \$1.5 billion Veterans Land Board housing, home improvement and land programs. Served as a Loan Review Committee Member.

- Increased revenue income over 15%.
- Reduced processing time in Loan Services by 20-25%.
- Increased Veterans participation and satisfaction with the agency's program.

***Executive Assistant, Senior Deputy's Office (1988 – 1989)***

Coordinated all policy decisions, programs, and operations of agency, operated budget of more than \$22 million and implemented Commissioner's initiatives.

- Led research on alternative fuels programs.
- Crafted executive reports on Coastal Land Management and Energy Marketing & Pipeline Transportation issues.
- Developed the minerals and land management environmental assessment.

***Auditor, Energy Resources (1987 – 1988)***

Audited oil and gas, and mineral leases of 14 million acres of public land generating approximately \$400 million annual revenue, prepared royalty account records, schedules, and contractual agreements of state leased lands.

- Administered audit guidelines and business review procedures which improved revenue recovery over 10-20%.
- Implemented document and record controls for performance compliance.
- Negotiated and collaborated fair mineral lease provisions with leaseholders.

## **Professional Memberships and Affiliations**

Board Member, CS Week (The Premier Utility Customer Service Learning Experience) – Current  
Board Member, University of Idaho Utility Executive Course – Current  
Member, Texas Public Power Association – Current  
Chair, CS Week Executive Summit  
Board Member, Austin Area Urban League  
Board Member, Public Employees Credit Union  
Fellow, Governor's Executive Leadership Development Program  
Committee Member, Western States Land Commissioners Association  
Committee Member, Eastern States Land Commissioners Association  
ELI Graduate, Executive Leadership Institute - National Forum of Black Public Administrators  
Fellow, Washington Campus Program (Washington, D.C.)  
Intern, United States Senator Lloyd Bentsen  
U.S. Delegate, World Youth Forum (Finland)  
U.S. Delegate, U.S. Soviet Emerging Leaders Summit (Moscow)  
Board Member, Rice Alumni Association  
Board Member, American Center for International Leadership  
Quarterback, Rice Athletics (Four-year Letterman)

## **Education**

<b>The University of Texas at Austin</b> , Austin, Texas	December 1997
M.B.A. Graduate School of Business	
M.P.A. Lyndon B. Johnson School of Public Affairs	
<b>Rice University</b> , Houston, Texas	May 1987
B.A. Managerial Studies and Political Science	

TLSC 1-3. Excluding secretarial, administrative, and such other support individuals, please identify each person that participated in the preparation of the rate filing package.

ANSWER:

Please see Austin Energy's response to TLSC's RFI No. 1-4.

Prepared by: BE  
Sponsored by: Mark Dreyfus



TLSC 1-4. For each person identified or referenced in RFI No. 1-3, please provide the following:

- a. The business address, including phone number, for that person;
- b. The portions of the rate filing package the person participated in preparing;
- c. A resume providing the same information requested in RFI No. 1-2(b), or if an AE employee, the job classification and job description for that person.

ANSWER:

In response to sub-questions (a) and (b), please see Attachment 1.

In response to sub-question (c), current Austin Energy employees' job classification and job description are included in Attachment 2.

Please also see Austin Energy's response to TLSC RFI No. 1-9 for a list of consultants who participated in the development of the rate filing package, their contact information, and the details of their professional experience.

Prepared by: BE  
Sponsored by: Mark Dreyfus

Name	Job Classification	Address	Phone Number	Portion of the Rate Filing Package
Larry Weis	<i>No longer employed at Austin Energy</i>			RD
Cheryl Mele	<i>No longer employed at Austin Energy</i>			RTC, RD
Elaina Ball	VP, Power Production & Acting Chief Operating Officer	721 Barton Springs Road, Austin Texas 78704	(512) 322-6015	RTC, RD
John Wester	Director, Power Production Project & Asset Management	721 Barton Springs Road, Austin Texas 78704	(512) 972-9402	RTC, FRS, NNDCS
Ricky Kirkland	Power System Principal Engineer	721 Barton Springs Road, Austin Texas 78704	(512) 322-6428	RTC, FRS, NNDCS
Steve Wotruba	<i>No longer employed at Austin Energy</i>			RTC, FRS, NNDCS
Lee Lewis	Power Plant Manager	1101 Fallwell Ln, Del Valle, TX 78617	(512) 972-9409	RTC, FRS, NNDCS
Dan Smith	VP, Electric Service Delivery	721 Barton Springs Road, Austin Texas 78704	(512) 505-7009	RTC, RD
Allen Small	Director, Distribution	721 Barton Springs Road, Austin Texas 78704	(512) 505-7111	RTC, COS
Bob Seaver	Manager, Distribution Process	2526 Kramer Ln, Austin, TX 78758	(512) 505-7043	RTC, COS
Khalil Shalabi	VP, Energy Market Operations and Resource Planning	721 Barton Springs Road, Austin Texas 78704	(512) 322-6520	RTC, RD
Sathibabu Chakka	Manager, Energy Market	721 Barton Springs Road, Austin Texas 78704	(512) 322-6010	COS
Kerry Overton	Deputy General Manager	721 Barton Springs Road, Austin Texas 78704	(512) 322-6113	RTC, RD
Mark Dombroski	Senior VP, Finance and Corporate Services & Interim GM	721 Barton Springs Road, Austin Texas 78704	(512) 322-6148	RTC, RD, COS, SVCC, SCS, FRS, NNDCS
Russell Maenius	Director, Financial Planning and Budget	721 Barton Springs Road, Austin Texas 78704	(512) 322-6133	RTC, RD, COS, SVCC, SCS, FRS, NNDCS
Colleen Gardner	Regulatory Planner Utility	721 Barton Springs Road, Austin Texas 78704	(512) 322-6384	RTC, RD, COS, SVCC, SCS, FRS, NNDCS
John Oberwortmann	Manager, Utility Budget and Finance	721 Barton Springs Road, Austin Texas 78704	(512) 322-6419	RTC, RD, COS, SVCC, SCS, FRS, NNDCS
Joe Lara	Regulatory Planner Utility	721 Barton Springs Road, Austin Texas 78704	(512) 322-6303	RTC, RD, COS
Christopher Mickelson	Regulatory Planner Utility	721 Barton Springs Road, Austin Texas 78704	(512) 505-3730	RTC, RD, COS
Zoe Dadap	Regulatory Planner Utility	721 Barton Springs Road, Austin Texas 78704	(512) 322-6469	RTC, RD, COS
Mark Mirick	Senior Utility Financial Analyst	721 Barton Springs Road, Austin Texas 78704	(512) 322-6089	RTC, RD, COS
Gordon Alexander	Regulatory Planner Utility	721 Barton Springs Road, Austin Texas 78704	(512) 322-6387	RTC, RD, COS
Cathy Foster	Director, Financial Planning and Budget	721 Barton Springs Road, Austin Texas 78704	(512) 322-6528	RTC, RD, COS, SVCC, SCS, FRS, NNDCS
Stephanie Koudelka	Accounting Manager Utility	721 Barton Springs Road, Austin Texas 78704	(512) 322-6373	RTC, RD, COS, SVCC, SCS, FRS, NNDCS
David Kutach	Director, Financial Planning and Budget	721 Barton Springs Road, Austin Texas 78704	(512) 322-6357	RTC, RD, COS, SVCC, SCS, FRS, NNDCS
Tamila Nikazm	Director, Financial Planning and Budget	721 Barton Springs Road, Austin Texas 78704	(512) 322-6550	RTC
Mark Dreyfus	VP, Regulatory Affairs and Corporate Communications	721 Barton Springs Road, Austin Texas 78704	(512) 322-6544	RTC, RD, COS, SVCC, SCS, FRS, NNDCS
Adrianne Brandt	<i>No longer employed at Austin Energy</i>			RTC, RD, COS
Barksdale English	Austin Energy Utility Strategist	721 Barton Springs Road, Austin Texas 78704	(512) 322-6314	RTC, RD, COS, SVCC, SCS, FRS, NNDCS
Peter McCrady	Public Information Specialist Senior	721 Barton Springs Road, Austin Texas 78704	(512) 505-3737	RTC
Debbie Kimberly	VP, Customer Energy Solutions	721 Barton Springs Road, Austin Texas 78704	(512) 322-6327	RTC, RD
Danielle Murray	Solar Program Manager	821 Barton Springs Road, Austin, Texas 78704	(512) 322-6055	RTC
Tim Harvey	Program Coordinator, Environmental	821 Barton Springs Road, Austin, Texas 78704	(512) 482-5386	RTC
Denise Kuehn	Director, Energy Efficiency Services	821 Barton Springs Road, Austin, Texas 78704	(512) 322-6318	RTC
Scott Jarman	Engineer, Consulting	821 Barton Springs Road, Austin, Texas 78704	(512) 482-5307	RTC

**Legend:**

RTC	Report to Council
COS	Cost of Service model
RD	Rate Design
SVCC	Secondary Voltage Customer Class analysis - assess the current delineations between secondary voltage customer classes and recommend adjustments (e.g., 0 - 10 kW, 10 - 300 kW, > 300 kW)
SCS	Small Commercial Study - evaluate and benchmark the rate structure appropriate for small commercial customers
FRS	Financial Reserves Study
NNDCS	Non-Nuclear Decommissioning Cost Study - a subset of the Financial Reserves Study



## City of Austin - JOB DESCRIPTION



### Vice President, Power Production

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<b>FLSA:</b>	Executives/2	<b>EEO Category:</b>	(10) Official/Adm
<b>Class Code:</b>	19045	<b>Salary Grade:</b>	E00
<b>Approved:</b>	December 01, 2000	<b>Last Revised:</b>	September 11, 2013

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#### **Purpose:**

Responsible for the independent leadership, management and operation of Austin Energy's Power Plants. The Division is responsible to support the needs of both the ERCOT Wholesale Market and Austin Energy's customers through safe and effective Power Plant Operations, Engineering and Technical Services and Joint Project oversight. Responsible for ensuring the safe, efficient and environmentally responsible operation of Austin Energy's generation fleet in compliance with all state, federal and local rules, operating guides, standards and laws.

#### **Duties, Functions and Responsibilities:**

Essential duties and functions, pursuant to the Americans with Disabilities Act, may include the following. Other related duties may be assigned.

1. Ensures safe and efficient construction and operation of Austin Energy's power generating facilities including the Sand Hill Energy Center and the Decker Creek Power Station.
2. Ensures effective oversight and management of Austin Energy's jointly-owned generating facilities, including the South Texas Nuclear Project and Fayette Power Project.
3. Ensures effective maintenance strategies and operation of the generation facilities. Closely aligns strategy development with the Energy Market Operations team to assure support and optimization of the ERCOT Wholesale Energy Market.
4. Ensures compliance with all safety, reliability and environmental standards and requirements.
5. Promotes confidence and public trust through communications and actions.
6. Develops and monitors O&M and Capital budgets and responds to any deviations from the approved cost/time line projections.
7. Develops and implements Austin Energy business plans that promote completion of the overall City of Austin business/strategic plans and initiatives.
8. Recruits, develops and retains a high performing workforce, including management and senior professional staff, to ensure completion of assigned goals and objectives.
9. Understands and communicates legislative, regulatory and industry trends impacting Austin Energy Power Production initiatives.
10. Maintains strong relationships and strategic alliance with Austin Energy's Market Operations team to assure overall AE objectives and performance.

#### **Responsibilities - Supervisor and/or Leadership Exercised:**

Responsible for the full range of supervisory activities including selection, training, evaluation, counseling, and recommendation for dismissal.

#### **Knowledge, Skills, and Abilities:**

Must possess required knowledge, skills, abilities and experience and be able to explain and demonstrate, with or without reasonable accommodations, that the essential functions of the job can be performed.

Knowledge of utility finance, high value asset utilization and regulatory / legislative issues.

Knowledge of electric utility processes, practices, issues and policies.

Knowledge of alternative generation theories, plans, and models.

Knowledge and skills in wholesale energy market and transmission risk management rules, operations and strategies.

Knowledge of plant operations and the management of power production systems, including, combustion turbines, natural gas steam turbines, coal-fired steam turbines, nuclear generating stations and large scale renewable assets such as wind turbines, biomass, and utility scale solar.

Knowledge of power market demand and supply.

Knowledge of ERCOT operating guides and protocols.

Knowledge of NERC Reliability Standards.

Knowledge of quality management methods and ability to implement change and performance goals for continuous improvement.

Understand evolving energy markets and need to provide generation at competitive market price.

Skill in assessing industry trends and responding to industry pressures.

Ability to assimilate and act timely on conflicting, incomplete, and disparate information to meet overall objectives.

Ability to coach and develop subordinate staff.

Skill in Diversity Management.

Ability to understand and explain complex issues to non-utility stakeholders.

Ability to meet financial and performance objectives.

**Minimum Qualifications:**

Graduation from an accredited four-year college or university with major coursework in Engineering, Business or in a field related to the job, plus seven (7) years of related electric utility experience, five (5) of which were in a managerial capacity.

Masters degree may substitute for two (2) years of the required experience up to a maximum of two (2) years.

**Licenses and Certifications Required:**

None

This description is intended to indicate the kinds of tasks and levels of work difficulty required of the position given this title and shall not be construed as declaring what the specific duties and responsibilities of any particular position shall be. It is not intended to limit or in any way modify the right of management to assign, direct and control the work of employees under supervision. The listing of duties and responsibilities shall not be held to exclude other duties not mentioned that are of similar kind or level of difficulty.



## City of Austin - JOB DESCRIPTION



### Director, Power Production Project & Asset Management

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<b>FLSA:</b>	Standard/Exempt	<b>EEO Category:</b>	(20) Professionals
<b>Class Code:</b>	12782	<b>Salary Grade:</b>	ZB8
<b>Approved:</b>	February 12, 2001	<b>Last Revised:</b>	February 18, 2014

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#### **Purpose:**

Provides power plant construction management and project management services for new and existing AE operated generation facilities. Provides direction and oversight to jointly owned, independently operated power plant facilities. Delivers generation projects and supply at a competitive market price in a safe, clean, compliant and reliable manner.

#### **Duties, Functions and Responsibilities:**

Essential duties and functions, pursuant to the Americans with Disabilities Act, may include the following. Other related duties may be assigned.

1. Provides direction and guidance to Austin Energy Management Committees at the co-owned Fayette Power Project (FPP) and STP Nuclear Operating Company facilities. Provides generation at a competitive market price with a high degree of safety, reliability, environmental compliance, and in close coordination with the AE market operations needs.
2. Directs activities associated with the Power Production Team's Quality Management Systems (QMS) for ISO 9001 certification and oversees NERC compliance programs for Power Production.
3. Directs and manages new facility construction, which includes new build of power plants or expansion of existing facilities.
4. Leads projects through public processes including development, permitting and regulatory approvals, design, procurement, construction & installation, startup & commissioning and closeout.
5. Responsible for management of the Power Production Team's Business Plan, including development and alignment of performance measures, project portfolio, capital budget and initiatives within AE and through the Joint Projects management committees.
6. Provides input and makes recommendations to the Austin Energy Executive Management Team on issues and industry trends for nuclear and coal fueled power plants.
7. Manages and delivers projects following all applicable engineering, regulatory, commercial and safety policies, procedures, and standards.
8. Delivers projects using best-practice project and construction methodologies to ensure on-time, on-budget, as-designed delivery of power production projects.
9. Provides technical support and troubleshooting assistance to the power plants in areas expertise following all applicable engineering and safety policies, procedures and standards.
10. Actively drives improvements in safety, efficiency, reliability, production costs, and work processes.
11. Takes responsibility for own safety and that of co-workers, as well as the safety and protection of power production assets and the general public.

#### **Responsibilities - Supervisor and/or Leadership Exercised:**

Responsible for the full range of supervisory activities including selection, training, evaluation, counseling and recommendation for dismissal.

#### **Knowledge, Skills, and Abilities:**

Must possess required knowledge, skills, abilities and experience and be able to explain and demonstrate, with or without reasonable accommodations, that the essential functions of the job can be performed.

- Experience in managing design/build construction of large industrial facilities
- Experience in deploying quality systems
- Experience with the development, negotiation, management and administration of design build, EPC, multi-contracts and/or other commercial agreements in excess of \$100M in value
- Experience in advanced negotiation and commercial value engineering techniques
- Expertise in construction site planning, commissioning means/methods, budget/schedule control, and advanced supplier management skills.
- Expertise in risk mitigation and management, commercial terms and contract management
- Knowledge and application of best practice project and portfolio management methodologies

- Knowledge and skill in deploying quality systems and improvement methods
- Knowledge and experience risk management and compliance programs
- Knowledge and experience with strategic business planning methods
- Broad based knowledge of power plant operations and maintenance
- Knowledge of environmental regulation and compliance
- Knowledge of functions and operations of inter-governmental, private or public agencies.
- Excellent verbal and written communication skills.
- Knowledge of engineering principles.

**Minimum Qualifications:**

Graduation from an accredited four-year college or university with major course work in Engineering, plus five (5) years experience in a field related to power station operation and maintenance, three (3) of which were in a supervisory or managerial capacity.

**Licenses and Certifications Required:**

None

This description is intended to indicate the kinds of tasks and levels of work difficulty required of the position given this title and shall not be construed as declaring what the specific duties and responsibilities of any particular position shall be. It is not intended to limit or in any way modify the right of management to assign, direct and control the work of employees under supervision. The listing of duties and responsibilities shall not be held to exclude other duties not mentioned that are of similar kind or level of difficulty.



## City of Austin - JOB DESCRIPTION



### Power System Principal Engineer

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<b>FLSA:</b>	Standard/Exempt	<b>EEO Category:</b>	(20) Professionals
<b>Class Code:</b>	17096	<b>Salary Grade:</b>	HC4
<b>Approved:</b>	January 22, 2006	<b>Last Revised:</b>	August 11, 2015

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#### Purpose:

Provides organizational or technical engineering leadership and oversight of utility programs, projects or teams. Oversees technical and quality aspects of projects and services to assure delivery of services to customers, advancement of new technologies and processes, and/or development and maintenance of technical utility standards. Utilizing technical strength and experience, engages in multiple engineering activities, cross functional projects and team leadership. May lead research projects or staff engaged in research projects, oversee technical reviews and/or supervise staff including the work of other design or engineering staff. May provide training and mentoring to new engineers or provide engineering guidance in other parts of the company as they are seen as technical experts in their field. Demonstrated experience and technical strength in advanced engineering analysis, design, and technical support in one or more of the following: power generation, electric substation, transmission, protective relaying and control, and distribution systems, Energy Management Systems (EMS), market operation and settlement systems, Supervisory Control and Data Acquisition (SCADA) systems, and other intelligent grid technologies and systems. Functions as a senior technical expert serving as a final point of support and/or technical escalations. This position exists only in the Power Production, Energy Market Operations, On-Site Energy Resources and Electrical Services Delivery department of Austin Energy.

#### Duties, Functions and Responsibilities:

Essential duties and functions, pursuant to the Americans with Disabilities Act, may include the following. Other related duties may be assigned.

1. Develops or oversees development of technical specifications and standards by applying knowledge of the principles and practices of engineering discipline, including the methods, materials, equipment and techniques used. Review, analyze and interpret plans, specifications, contracts and other related documents.
2. Manages and coordinates engineering programs, projects or teams.
3. Plans, researches, designs, and implements engineering studies and projects and/or program areas by applying advance technical knowledge of engineering discipline.
4. Manages and negotiates contracts by reviewing monthly progress reports, verifying final quantities and costs, compiling requisite documentation, reviewing change orders, and auditing as-built records. Acts as a liaison among consultants, contractors, subcontractors, manufacturers, fabricators or suppliers and City. Negotiates problems of changes, errors or deficiencies and ensures compliance with project specifications and requirements.
5. Leads teams of technical personnel including assigning and monitoring tasks to assure consistency with standards, quality and completeness. Reviews standards and updates as needed, technical training to staff and field personnel by reviewing business needs, evaluation of personnel, creating and applying training documentation, presentation and analysis of training.
6. Develops and monitors budget of projects. Assist in develop, managing and submit proposed budget forecast planning for short and long term city planning.
7. Monitor projects for regulatory compliance.
8. Keep up with the latest developments in the utility industry, to meet North American Electric Reliability Council (NERC), Federal Energy Regulatory Commission (FERC), Electric Reliability Council of Texas (ERCOT) and Texas Public Utility Commission (TX PUC) standards and regulatory requirements.

#### Responsibilities - Supervisor and/or Leadership Exercised:

- May be responsible for the full range of supervisory activities including selection, training, evaluation, counseling, and recommendation for dismissal.

#### Knowledge, Skills, and Abilities:

Must possess required knowledge, skills, abilities and experience and be able to explain and demonstrate, with or without reasonable accommodations, that the essential functions of the job can be performed.

- Knowledge of engineering design principles applicable to electric utility operations such as, generation, transmission, distribution and other related fields.
- Knowledge of advanced mathematical techniques such as trigonometry, calculus, and coordinate geometry.
- Knowledge of engineering standards, codes, practices, procedures, materials, and equipment used in the design, construction, and operation of the electric utility systems.
- Knowledge of established engineering principles and methods.
- Knowledge of preparation of cost estimates and engineering and feasibility reports.
- Ability to perform more complex engineering calculations and to analyze engineering problems.
- Knowledge of regulatory requirements within the local, state and federal ordinances and laws.
- Skill in oral and written technical and/or general communication including preparation of written reports.
- Skill in negotiations and handling conflict resolution.
- Knowledge of City of Austin purchasing and contract policies and procedures.

#### **Minimum Qualifications:**

- Graduation from an accredited four-year college or university with major coursework in Engineering, or in a field related to the job, eight (8) years of experience in engineering, acquired either before and/or after licensing as a professional engineer.
- Some positions may require prior supervision or lead experience.

#### **Licenses and Certifications Required:**

- Licensed Professional Engineer (PE) in the State of Texas; or if currently licensed in another state, the ability to obtain a Texas PE license within one (1) year of employment.

This description is intended to indicate the kinds of tasks and levels of work difficulty required of the position given this title and shall not be construed as declaring what the specific duties and responsibilities of any particular position shall be. It is not intended to limit or in any way modify the right of management to assign, direct and control the work of employees under supervision. The listing of duties and responsibilities shall not be held to exclude other duties not mentioned that are of similar kind or level of difficulty.





## City of Austin - JOB DESCRIPTION



### Power Plant Manager

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<b>FLSA:</b>	Standard/Exempt	<b>EEO Category:</b>	(20) Professionals
<b>Class Code:</b>	17100	<b>Salary Grade:</b>	ZN3
<b>Approved:</b>	December 01, 2000	<b>Last Revised:</b>	December 01, 2010

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#### **Purpose:**

Responsible for directing the operations, maintenance, safety, and environmental compliance of a power generating station, a combined heat and power plant, or a district cooling and thermal energy storage systems.

#### **Duties, Functions and Responsibilities:**

Essential duties and functions, pursuant to the Americans with Disabilities Act, may include the following. Other related duties may be assigned.

1. Develops and manages the O & M and CIP budgets. Develops, implements, and monitors goals and objectives. Develops and monitors performance measures. Establishes program/project priorities.
2. Resolves personnel issues.
3. Creates, reviews, or revises procedures/processes to increase efficiency.
4. Reports trends, deviations, and compliance, as required.
5. Ensures compliance with all applicable safety and environmental regulations.
6. Optimizes the operations and maintenance of energy plants to minimize costs and maximize reliability.
7. Manages customer relations for on-site and district energy customers.

#### **Responsibilities - Supervisor and/or Leadership Exercised:**

- Responsible for the full range of supervisory activities including selection, training, evaluation, counseling, and recommendation for dismissal.

#### **Knowledge, Skills, and Abilities:**

Must possess required knowledge, skills, abilities and experience and be able to explain and demonstrate, with or without reasonable accommodations, that the essential functions of the job can be performed.

- Knowledge of operations, maintenance, and environmental processes and procedures for a power generating plant, a district cooling plant, or a combined heat or power plant.
- Knowledge of power generation concepts, principles, and alternatives
- Knowledge of Federal, State, and Local requirements affecting power plants
- Knowledge of ERCOT operating guides and protocols.
- Demonstrated knowledge of NERC Reliability Standards
- Skill in managing around-the-clock operation and maintenance activities
- Skill in applying sound engineering and/or management principles in identifying, analyzing, and resolving issues
- Skill in setting priorities
- Ability to communicate with technical and non-technical staff
- Ability to establish meaningful performance measures
- Ability to create and maintain positive relationships with internal and external customers

#### **Minimum Qualifications:**

- Graduation from an accredited four-year college or university with major course work in Engineering, Business or in a field related to the job, plus seven (7) years experience in the operation and maintenance of a power generating plant, a combined heat and power plant, a district cooling plant with thermal energy storage, or related industrial or other utility scale production facilities.

#### **Licenses and Certifications Required:**

None.

This description is intended to indicate the kinds of tasks and levels of work difficulty required of the position given this title and shall not be construed as declaring what the specific duties and responsibilities of any particular position shall be. It is not intended to limit or in any way modify the right of management to assign, direct and control the work of

employees under supervision. The listing of duties and responsibilities shall not be held to exclude other duties not mentioned that are of similar kind or level of difficulty.



## City of Austin - JOB DESCRIPTION



### Electric Services Delivery Vice President

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<b>FLSA:</b>	Executives/2	<b>EEO Category:</b>	(10) Official/Adm
<b>Class Code:</b>	10150	<b>Salary Grade:</b>	E00
<b>Approved:</b>		<b>Last Revised:</b>	December 21, 2009

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**Purpose:**

Responsible for leading effective and efficient planning construction, reliability, engineering, and operations and maintenance of Austin Energy's electric service delivery infrastructure and workforce. Responsible for maintaining and adhering to safety, quality, and compliance requirements.

**Duties, Functions and Responsibilities:**

Essential duties and functions, pursuant to the Americans with Disabilities Act, may include the following. Other related duties may be assigned.

1. Determines goals, objectives, and resource requirements for activities within the division.
2. Develops and implements short and long range plans, programs, and oversees activities associated with administrative, managerial support, fiscal management, program planning, and evaluation.
3. Plans, organizes, directs and audits processes and business practices to ensure effectiveness and adherence to all industry quality, regulatory, and compliance requirements.
4. Communicates Electric Service Delivery programs to management, staff and others.
5. Develops and monitors assigned O&M and CIP budgets.
6. Investigates and responds to complaints from citizens, management, and staff.
7. Prepares and reviews reports as part of the process of monitoring and communicating performance results.
8. Liaisons with national public utility organizations, non-governmental organizations, and other state, federal and local organizations.

**Responsibilities - Supervisor and/or Leadership Exercised:**

Responsible for the full range of supervisory activities including selection, training, evaluation, counseling, and recommendation for dismissal.

**Knowledge, Skills, and Abilities:**

Must possess required knowledge, skills, abilities and experience and be able to explain and demonstrate, with or without reasonable accommodations, that the essential functions of the job can be performed.

Knowledge of Federal, State and Local laws, ordinances, and policies.

Knowledge of ERCOT Operating Guides and Protocols.

Knowledge of NERC (National Standards Electric Reliability Corp)

Knowledge of ISO or other Quality Management systems.

Knowledge of fiscal planning and budget preparation.

Knowledge of supervisory and managerial techniques and principles.

Knowledge of new technologies, as applicable, based in development of solid business case applications.

Skill in oral and written communications.

Skill in handling multiple tasks and prioritizing.

Skill in using computers and related software applications.

Skill in data analysis and problem solving.

Skill in diversity management.

Ability to analyze and resolve irregular events.

Ability in establish and maintain effective communication and working relationships with city employees and the public.

**Minimum Qualifications:**

Graduation from an accredited four year college or university with major coursework in Business, Engineering, or in a field related to the job, plus five (5) years of relevant experience, two (2) years of which were in a managerial or executive capacity.

Masters degree may substitute for experience up to a maximum of two (2) years.

**Licenses and Certifications Required:**

None.

This description is intended to indicate the kinds of tasks and levels of work difficulty required of the position given this title and shall not be construed as declaring what the specific duties and responsibilities of any particular position shall be. It is not intended to limit or in any way modify the right of management to assign, direct and control the work of employees under supervision. The listing of duties and responsibilities shall not be held to exclude other duties not mentioned that are of similar kind or level of difficulty.



## City of Austin - JOB DESCRIPTION



### Director, Distribution

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<b>FLSA:</b>	Standard/Exempt	<b>EEO Category:</b>	(20) Professionals
<b>Class Code:</b>	12877	<b>Salary Grade:</b>	ZP9
<b>Approved:</b>	February 12, 2001	<b>Last Revised:</b>	August 10, 2010

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#### Purpose:

Under nominal supervision, manages the overall program activities of the Electric Service Delivery Distribution Division, including permit review, design, construction, and maintenance of distribution, network and illumination systems.

#### Duties, Functions and Responsibilities:

Essential duties and functions, pursuant to the Americans with Disabilities Act, may include the following. Other related duties may be assigned.

1. Oversees the operations of the Distribution Services business which includes the permit review, customer service, design, construction and maintenance of distribution, network and streetlight system improvements and service delivery facilities.
2. Establishes expectations for effectiveness of design, work management and construction activities, equipment and systems in a productive, economic, and safe manner within internal policies, procedures, and guidelines, as well as external regulatory requirements.
3. Evaluates and monitors departmental and interdepartmental accountability and productivity to deliver needs of customers and business operations. Establish systemic feedback loops to correct any gaps or compliance issues; devises the necessary quality control measures to track effectiveness of operations and personnel.
4. Provides direction to operational staff to ensure customer needs are met using an array of communication tools. Provide the necessary personnel and tools to meet key project milestones. Provides oversight and coordination of activities for each of the business units to support the electric delivery service needs of industrial, commercial and residential developers.
5. Reviews Capital Improvement and Operation & Maintenance budgets and associated performance and cost drivers to determine areas for improvement or cost reductions.
6. Conducts operational cost benefit analyses.
7. Conducts program assessments for long and short term strategic initiatives to enhance distribution service delivery for the electric utility.
8. Serves as a subject matter expert by providing advice to legal and city staff and others regarding distribution business operations.
9. Ensures overall standards of conduct and safety are maintained within the organization.

#### Responsibilities - Supervisor and/or Leadership Exercised:

- Responsible for the full range of supervisory activities including selection, training, evaluation, counseling, and recommendation for dismissal

#### Knowledge, Skills, and Abilities:

Must possess required knowledge, skills, abilities and experience and be able to explain and demonstrate, with or without reasonable accommodations, that the essential functions of the job can be performed.

- Knowledge of federal, state and local laws, ordinances, policies and procedures covering distribution and electric utility regulations.
- Broad technical and business knowledge of core operational services of an electric utility.
- Knowledge of program budgets with evaluation, planning, submission and monitoring processes.
- Knowledge and ability to lead and manage employees and provide visible hands-on people-oriented leadership;
- Skill in written and oral communication.
- Skill in handling conflict or intense workplace issues;
- Ability to use a sphere of influence to mitigate issues;
- Ability to evaluate resource needs and effectiveness of staff through coaching and training;
- Ability to analyze and solve very complex problems in area of assigned operations;
- Ability to shift priorities to meet the business needs of the stakeholder.

- Ability to provide business case arguments in support of technical needs, operational needs, safety or compliance issues

**Minimum Qualifications:**

- Graduation from an accredited four-year college or university with major coursework in a field related to Engineering, Business, Public Administration, Communications, Construction Science, or related to the job, plus seven (7) years related experience, four (4) years of which were in a supervisory or managerial capacity

**Licenses and Certifications Required:**

None.

This description is intended to indicate the kinds of tasks and levels of work difficulty required of the position given this title and shall not be construed as declaring what the specific duties and responsibilities of any particular position shall be. It is not intended to limit or in any way modify the right of management to assign, direct and control the work of employees under supervision. The listing of duties and responsibilities shall not be held to exclude other duties not mentioned that are of similar kind or level of difficulty.



## City of Austin - JOB DESCRIPTION



### Distribution Process Manager

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<b>FLSA:</b>	Standard/Exempt	<b>EEO Category:</b>	(20) Professionals
<b>Class Code:</b>	13003	<b>Salary Grade:</b>	ZB7
<b>Approved:</b>	December 01, 2000	<b>Last Revised:</b>	March 17, 2011

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#### Purpose:

Distribution Operations functions may include, Engineering Design, Construction, Metering and Work Management sections, and the delivery of electric services to all residential, commercial and industrial customers.

#### Duties, Functions and Responsibilities:

Essential duties and functions, pursuant to the Americans with Disabilities Act, may include the following. Other related duties may be assigned.

1. Plans, organizes, directs, evaluates and controls Power Delivery Distribution activities.
2. Manages personnel responsible for engineering designs and work orders for the installation of new and upgraded overhead and underground services; construction activities for customer and system requirements throughout the service area; installation and upgrade construction activities throughout the services area.
3. Schedule staff, contractors, and materials for construction projects.
4. Manages complex metering operations including specification, calibration, maintenance, and repair of residential, commercial and industrial metering.
5. Serves as Vice President of Power Delivery in his/her absence.
6. Oversees a multi-million-dollar budget with significant financial impact.
7. Represents the City of Austin and Austin Energy interests to boards, commissions, and councils.
8. Assists in electric system restoration due to outages caused by storms or equipment failure.

#### Responsibilities - Supervisor and/or Leadership Exercised:

- Responsible for the full range of supervisory activities including selection, training, evaluation, counseling, and recommendation for dismissal.

#### Knowledge, Skills, and Abilities:

Must possess required knowledge, skills, abilities and experience and be able to explain and demonstrate, with or without reasonable accommodations, that the essential functions of the job can be performed.

- Broad based knowledge of Transmission and Distribution operations, evolving industry and regulatory developments.
- Knowledge of Transmission and Distribution customer requirements.
- Knowledge of environmental regulation and compliance requirements.
- Knowledge of utility financial, regulatory and managerial accounting practices.
- Knowledge of supervisory and managerial techniques and principles.
- Knowledge of fiscal planning and budget preparation.
- Skill in handling conflict and uncertain situations.
- Skill in collecting, analyzing, and interpreting applicable data.
- Skill in oral and written communication.
- Skill in handling multiple tasks and prioritizing.
- Skill in using computers and related software applications.
- Skill in data analysis and problem solving.
- Ability to work with frequent interruptions and changes in priorities.
- Ability to quickly recognize and analyze irregular events.
- Ability to establish and maintain excellent communication and working relationships with city personnel and the public.

#### Minimum Qualifications:

- Graduation from an accredited four-year college or university with major course work in Engineering. Business or in a field related to the job, plus seven (7) years related experience, four (4) years of which were in a

supervisory or managerial capacity.

**Licenses and Certifications Required:**

None.

This description is intended to indicate the kinds of tasks and levels of work difficulty required of the position given this title and shall not be construed as declaring what the specific duties and responsibilities of any particular position shall be. It is not intended to limit or in any way modify the right of management to assign, direct and control the work of employees under supervision. The listing of duties and responsibilities shall not be held to exclude other duties not mentioned that are of similar kind or level of difficulty.





## City of Austin - JOB DESCRIPTION



### Vice President, Enrgy Mkt Ops & Rsc Plng

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<b>FLSA:</b>	Executives/2	<b>EEO Category:</b>	(10) Official/Adm
<b>Class Code:</b>	19159	<b>Salary Grade:</b>	E00
<b>Approved:</b>	June 24, 2013	<b>Last Revised:</b>	September 11, 2013

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#### Purpose:

Under nominal direction from the Chief Operating Officer, is responsible for the independent leadership, management and development of Austin Energy's Wholesale Market Operations and Resource Planning. Responsible for implementation and development of strategies and action plans to achieve Austin Energy's resource plan in accordance with affordability goals and for further development of that plan beyond 2020. Planning responsibilities include integration of conventional and renewable power supplies, fuel supplies, financial risk management, real time dispatch and trading. Maintains compliance with all state, federal and local rules, operating guides, standards and laws.

#### Duties, Functions and Responsibilities:

Essential duties and functions, pursuant to the Americans with Disabilities Act, may include the following. Other related duties may be assigned.

1. Develops overall Generation Resource plan for Austin Energy in support of policy and goals established.
2. Maintains advanced knowledge of existing and new generation technologies to further develop forward strategies for AE Generation Resource Plan that optimize affordability and renewable energy.
3. Works closely with Power Production and DES to develop effective strategies for generation facilities, distributed solar and demand response programs to assure AE strategic and financial goals are met.
4. Develops models and forecasts to support wholesale market strategy and AE financial forecast.
5. Responsible for overall affordability of AE Power Supply Adjustment (and Fuel Adjustment Charge) costs and forecast.
6. Oversees staff engaged in fuel and energy portfolio and risk management program and daily wholesale market operations functions.
7. Ensures compliance with all safety, reliability, NERC and environmental standards and requirements.
8. Promotes confidence and public trust through communications and actions.
9. Develops and monitors O&M and Capital budgets and responds to any deviations from the approved cost/time line projections.
10. Develops and implements Austin Energy business plans that promote completion of the overall City of Austin business/strategic plans and initiatives.
11. Recruits, develops and retains a high performing workforce, including management and senior professional staff, to ensure completion of assigned goals and objectives.
12. Understands and communicates legislative, regulatory and industry trends impacting Austin Energy Power Production initiatives.

#### Responsibilities - Supervisor and/or Leadership Exercised:

Responsible for the full range of supervisory activities including selection, training, evaluation, counseling, and recommendation for dismissal.

#### Knowledge, Skills, and Abilities:

Must possess required knowledge, skills, abilities and experience and be able to explain and demonstrate, with or without reasonable accommodations, that the essential functions of the job can be performed.

Knowledge of utility finance, regulatory and legislative issues.

Knowledge of electric utility processes, practices, issues and policies.

Knowledge of alternative generation theories, plans, and models.

Knowledge and skills in wholesale energy market and transmission risk management rules, operations and strategies.

Knowledge of plant operations and the management including combustion turbines, natural gas steam turbines, coal-fired steam turbines, nuclear generating stations and large scale renewable assets such as wind turbines, biomass, and utility scale solar.

Knowledge of ERCOT operating guides and protocols.

Knowledge of NERC Reliability Standards.

Knowledge of quality management methods and ability to implement change and performance goals for continuous improvement.

Skill in assessing industry trends and responding to industry pressures.

Ability to assimilate and act timely on conflicting, incomplete, and disparate information to meet overall objectives.

Ability to coach and develop subordinate staff.

Skill in Diversity Management.

Ability to understand and explain complex issues to non-utility stakeholders.

Ability to meet financial and performance objectives.

**Minimum Qualifications:**

Graduation from an accredited four-year college or university with major coursework in Engineering, Business or in a field related to the job, plus seven (7) years of related electric utility experience, five (5) of which were in a managerial capacity.

Masters degree may substitute for two (2) years of the required experience up to a maximum of two (2) years.

**Licenses and Certifications Required:**

None

This description is intended to indicate the kinds of tasks and levels of work difficulty required of the position given this title and shall not be construed as declaring what the specific duties and responsibilities of any particular position shall be. It is not intended to limit or in any way modify the right of management to assign, direct and control the work of employees under supervision. The listing of duties and responsibilities shall not be held to exclude other duties not mentioned that are of similar kind or level of difficulty.



## City of Austin - JOB DESCRIPTION



### Energy Market Manager

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<b>FLSA:</b>	Standard/Exempt	<b>EEO Category:</b>	(20) Professionals
<b>Class Code:</b>	13441	<b>Salary Grade:</b>	Z07
<b>Approved:</b>	May 03, 2001	<b>Last Revised:</b>	January 31, 2008

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#### Purpose:

Under limited supervision responsible for management of wholesale energy market functions including energy marketing and dispatching, market systems development and implementation, wholesale market analysis and load forecasting, fuel procurement and risk management for Austin Energy

#### Duties, Functions and Responsibilities:

Essential duties and functions, pursuant to the Americans with Disabilities Act, may include the following. Other related duties may be assigned.

1. Responsible for managing a staff consisting of professional, technical, and administrative employees. Responsible for delivering reliable wholesale energy supplies to Austin Energy at competitive prices
2. Implement, monitor and evaluate complex programs including but not limited to: generation dispatch, QSE operations, wholesale energy market analysis, energy risk management, fuel procurement and energy supply and sales.
3. Manage sections that may include energy marketing and dispatching, market systems development and implementation, wholesale market analysis and load forecasting, fuel procurement and risk management including forecasting, hedging, trading and performance monitoring.
4. Manage systems development, implementation and integration for ERCOT settlement, market operations, load forecasting and power operations systems
5. Manage analysis and forecasting of electric power, natural gas, coal and related commodity prices and market trends, in the Texas and U.S. markets
6. Manage the development and implementation of wholesale energy supply, marketing and operating strategies. Responsible for O&M and capital budgets, work plans and achievement of objectives. Manage staff participation in the ERCOT market design and development process.
7. Represent the City of Austin and Austin Energy interests to boards, commissions, councils. Serve as Director, Energy Market and Operations in their absence.
8. Responsible for crucial decisions with significant financial impact on multi-million dollar budgets.

#### Responsibilities - Supervisor and/or Leadership Exercised:

- Responsible for the full range of supervisory activities including selection, training, evaluation, counseling, and recommendation for dismissal.

#### Knowledge, Skills, and Abilities:

Must possess required knowledge, skills, abilities and experience and be able to explain and demonstrate, with or without reasonable accommodations, that the essential functions of the job can be performed.

- Knowledge of wholesale fuel and electric markets and evolving industry and regulatory developments, both nationally and in Texas
- Knowledge of Austin Energy's wholesale fuel and energy requirements
- Knowledge of the impacts of recent deregulation trends in the fuel and energy markets
- Knowledge of utility financial practices, including budget preparation, financial, regulatory and managerial accounting practices
- Knowledge of systems used to forecast, evaluate and transact business in the wholesale fuel and energy markets
- Knowledge of applicable processes, techniques, and methods.
- Knowledge of Federal, State, Local laws, and ordinances governing fuel and energy markets.
- Knowledge of supervisory and managerial techniques and principles.
- Skill in planning, organizing, and managing multiple complex projects concurrently
- Skill in oral and written communication.
- Skill in handling multiple tasks and prioritizing.

- Skill in handling conflict resolution
- Skill in using computers and related software applications.
- Skill in data analysis and problem solving.
- Ability to work with frequent interruptions and changes in priorities.
- Ability to train others.
- Ability to quickly recognize and analyze irregular events.

**Minimum Qualifications:**

- Graduation from an accredited four-year college or university, plus seven (7) years experience in a related field, two (2) years in a supervisory or lead capacity.

**Licenses and Certifications Required:**

None.

This description is intended to indicate the kinds of tasks and levels of work difficulty required of the position given this title and shall not be construed as declaring what the specific duties and responsibilities of any particular position shall be. It is not intended to limit or in any way modify the right of management to assign, direct and control the work of employees under supervision. The listing of duties and responsibilities shall not be held to exclude other duties not mentioned that are of similar kind or level of difficulty.



## City of Austin - JOB DESCRIPTION



### Senior Vice President Austin Energy Finance & Corporate Services

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<b>FLSA:</b>	Executives/2	<b>EEO Category:</b>	(10) Official/Adm
<b>Class Code:</b>	19036	<b>Salary Grade:</b>	E00
<b>Approved:</b>	August 23, 1999	<b>Last Revised:</b>	April 19, 2010

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#### Purpose:

Reporting to the General Manager and with nominal direction executes responsibilities as Chief Financial Officer for Austin Energy. This position has the fiduciary responsibility for administering all financial proceedings of the electric utility. Oversees the operations of the Austin Energy's Financial and Corporate Services Business Unit including Risk Control and those business services managed by the Vice President of Austin Energy Finance and Corporate Services.

#### Duties, Functions and Responsibilities:

Essential duties and functions, pursuant to the Americans with Disabilities Act, may include the following. Other related duties may be assigned.

1. Plans, negotiates, organizes, directs, audits and controls activities of finance and corporate services.
2. Analyzes employee and business needs and develops short and long range strategies, goals, and action plans to meet those needs.
3. Develops and monitors the department and business unit O & M and CIP budgets and responds to any deviations.
4. Communicates legislative issues and industry trends impacting Austin Energy.
5. Develops and implements Austin Energy business plans that promote completion of the overall City of Austin business/strategic plans and initiatives.
6. Prepares and reviews reports as part of the process of monitoring and communicating performance results.
7. Implements policies / procedures to ensure financial transactions originating in AE are handled timely and appropriately. Establishes and maintains internal controls that provide cost-effective assurance that City funds are safeguarded and handled appropriately.
8. Communicates financial and other corporate information to management and others.
9. Presents to City Council, Boards, commissions, vendors and the general public.

#### Responsibilities - Supervisor and/or Leadership Exercised:

Responsible for the full range of supervisory activities including selection, training, evaluation, counseling, and recommendation for dismissal.

#### Knowledge, Skills, and Abilities:

Must possess required knowledge, skills, abilities and experience and be able to explain and demonstrate, with or without reasonable accommodations, that the essential functions of the job can be performed.

- Knowledge of local, state and federal law as well as City ordinances and policies.
- Knowledge of supervisory and managerial techniques and principles.
- Knowledge of fiscal planning and budget preparation.
- Knowledge of municipal finance and accounting.
- Knowledge of electric utility industry.
- Knowledge of municipal and electric utility business operations, processes, practices, issues and policies.
- Skill in using computers and related software applications.
- Skill in oral and written communications.
- Skill in data analysis and problem solving.
- Ability to quickly recognize and analyze irregular events.
- Ability to establish and maintain effective communication and working relationships with city employees and the public.

#### Minimum Qualifications:

Graduation from an accredited four year college or university with major coursework in accounting, finance, economics or in a field related to the job, plus seven (7) years of relevant experience, four (4) of which were in a managerial or executive capacity.

Master's degree may substitute for two (2) years of the required experience up to a maximum of two (2) years.

#### Licenses and Certifications Required:

None.

This description is intended to indicate the kinds of tasks and levels of work difficulty required of the position given this title and shall not be construed as declaring what the specific duties and responsibilities of any particular position shall be. It is not intended to limit or in any way modify the right of management to assign, direct and control the work of employees under supervision. The listing of duties and responsibilities shall not be held to exclude other duties not mentioned that are of similar kind or level of difficulty.



## City of Austin - JOB DESCRIPTION



### Director, Financial Planning & Budget

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<b>FLSA:</b>	Standard/Exempt	<b>EEO Category:</b>	(20) Professionals
<b>Class Code:</b>	12072	<b>Salary Grade:</b>	ZQ5
<b>Approved:</b>	January 26, 2005	<b>Last Revised:</b>	August 10, 2010

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#### Purpose:

This position is located in the Financial Services Division of Austin Energy. Under minimal direction, this position is responsible for the planning and oversight of Austin Energy's Operating Budget, Capital Improvements Program Plan, Economic Forecast, Energy Load Forecast, and Long Range Financial Planning.

#### Duties, Functions and Responsibilities:

Essential duties and functions, pursuant to the Americans with Disabilities Act, may include the following. Other related duties may be assigned.

1. Directs the preparation and implementation of the Austin Energy Operating and Capital Improvement Budgets.
2. Analyzes employee and business needs and develop short and long range objectives, goals, and action plans to meet those needs.
3. Directs the development of the Long Range Financial Forecast, which integrates various models used by Austin Energy to estimate load and sales forecasts to generate the 10-year financial forecast.
4. Directs the Capital Improvement Plan process for Austin Energy.
5. Directs and reviews the Utility Economic Forecast for the Austin area to ensure that it is accurate and that the data can be used for the City of Austin's Financial Forecast and budgetary planning.
6. Develops long range planning goals by analyzing the energy and demand forecasts.
7. Ensures the availability of funds for all Austin Energy Council agenda items including the review and approval of all fiscal notes for Austin Energy Council items.
8. Provide financial advice to Austin Energy's executive team including modern methods of fiscal planning and budget preparation

#### Responsibilities - Supervisor and/or Leadership Exercised:

- Responsible for the full range of supervisory activities including selection, training, evaluation, counseling, and recommendation for dismissal

#### Knowledge, Skills, and Abilities:

Must possess required knowledge, skills, abilities and experience and be able to explain and demonstrate, with or without reasonable accommodations, that the essential functions of the job can be performed.

- Knowledge of local, state and federal law and city ordinances.
- Knowledge of the processes for various financial and operational planning including modern methods of fiscal planning and budget preparation.
- Knowledge of cost of service and cost allocation process in relation to utility industry rates and pricing.
- Knowledge of supervisory and managerial techniques and principles.
- Knowledge of financial accounting, reporting and management.
- Knowledge of financial forecasting methods.
- Knowledge of electric utility industry financial and operational trends.
- Skill in oral and written communications.
- Skill in handling conflict and uncertain situations.
- Skill in collecting, analyzing and interpreting applicable research data.
- Ability to work with frequent interruptions and changes in priorities
- Ability to train others.

#### Minimum Qualifications:

- Graduation from an accredited four-year college or university with major course work in Finance, Accounting, Economics, or in a field related to the job, plus seven (7) years experience in a field related to Utility Financial Planning, two (2) years of which were in a managerial capacity.

- Masters degree in Business, Finance, Accounting, Economics, or related field may substitute up to two (2) years.

**Licenses and Certifications Required:**

None.

This description is intended to indicate the kinds of tasks and levels of work difficulty required of the position given this title and shall not be construed as declaring what the specific duties and responsibilities of any particular position shall be. It is not intended to limit or in any way modify the right of management to assign, direct and control the work of employees under supervision. The listing of duties and responsibilities shall not be held to exclude other duties not mentioned that are of similar kind or level of difficulty.





## City of Austin - JOB DESCRIPTION



### Regulatory Planner Utility

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<b>FLSA:</b>	Standard/Exempt	<b>EEO Category:</b>	(20) Professionals
<b>Class Code:</b>	17850	<b>Salary Grade:</b>	AE7
<b>Approved:</b>	June 30, 1999	<b>Last Revised:</b>	February 01, 2008

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**Purpose:**

Plan, participate in and support Austin Energy's regulatory processes including accounting, reporting, planning, rate setting, expert testimony and other regulatory process requirements.

**Duties, Functions and Responsibilities:**

Essential duties and functions, pursuant to the Americans with Disabilities Act, may include the following. Other related duties may be assigned.

1. Supports the budgeting, financial planning and forecasting process to ensure potential impacts of regulation and de-regulation are considered in these processes develop and present Austin Energy's rate filings for regulated services
2. Monitors state and federal regulatory processes
3. Oversees, monitor and participate in the state regulatory authorities processes including rule changes, workshops and projects
4. Performs state and federal operational, fuel and financial reporting
5. Testifies as an expert witness in rate proceedings and workshops before the state regulatory authority
6. Conducts financial and economic analysis to include unbundling costs, stranded cost, decommissioning expense funding and other regulatory studies
7. Develops models for use in cost of service studies and regulatory reports
8. Liaisons with the technical staff of the state regulatory agency
9. Provides research on regulatory/de-regulatory accounting and related issues

**Responsibilities - Supervisor and/or Leadership Exercised:**

None.

**Knowledge, Skills, and Abilities:**

Must possess required knowledge, skills, abilities and experience and be able to explain and demonstrate, with or without reasonable accommodations, that the essential functions of the job can be performed.

- Knowledge of regulatory processes at the state, federal and local level
- Knowledge of transmission revenue requirements, rate design and rate filing requirements
- Knowledge of the unbundling process and determination of unbundled costs to determine regulated prices and potential market prices
- Knowledge of potential financial, capital budgeting and operational impacts of transition to retail access for electric services
- Knowledge of utility regulation/de-regulation issues
- Knowledge of municipal utility finance and accounting
- Knowledge of competitive business practices and analysis
- Ability to understand and implement performance based measurements
- Ability to complete detailed financial analysis
- Ability to work independently
- Ability to testify in regulatory proceedings
- Skill in generating and analyzing financial and statistical reports
- Skill in communicating effectively, orally and in writing
- Skill in using computers and related software applications
- Skill in performing quantitative analysis

**Minimum Qualifications:**

- Graduation from an accredited four-year college or university with major course work in a field related to Accounting, Economics, or Finance, plus six (6) years of relevant work experience in utility and/or regulatory

accounting or rate and regulatory processes.

- A Master's degree may substitute for two (2) years of experience

**Licenses and Certifications Required:**

None.

This description is intended to indicate the kinds of tasks and levels of work difficulty required of the position given this title and shall not be construed as declaring what the specific duties and responsibilities of any particular position shall be. It is not intended to limit or in any way modify the right of management to assign, direct and control the work of employees under supervision. The listing of duties and responsibilities shall not be held to exclude other duties not mentioned that are of similar kind or level of difficulty.



## City of Austin - JOB DESCRIPTION



### Utility Budget and Finance Manager

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<b>FLSA:</b>	Standard/Exempt	<b>EEO Category:</b>	(20) Professionals
<b>Class Code:</b>	15840	<b>Salary Grade:</b>	AI3
<b>Approved:</b>		<b>Last Revised:</b>	October 13, 2008

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#### Purpose:

Under minimal direction, responsible for the management and operations of a utility financial division which is responsible for the following functions: accounting, financial reporting, cash and debt management, rate setting and cost of service studies, budget/financial forecasting, CIS /billing support, payments, inventory accounting, financial management, purchasing, fleet, facilities and/or contract administration.

#### Duties, Functions and Responsibilities:

Essential duties and functions, pursuant to the Americans with Disabilities Act, may include the following. Other related duties may be assigned.

1. Manages the activities of one of the utility's financial divisions.
2. Provides financial advice to the utility's executive team.
3. Prepares, reviews, and recommends rates and prices for the utility's services.
4. Conducts technical financial analysis to support recommendations on rates.
5. Directs the preparation and implementation of, the utility's O & M and/or CIP budgets and cost of service rate studies
6. Directs the development of the Financial Forecast, which integrates various models used by the utility to estimate future revenue requirements, rates, and capital expenditures.
7. Plans, organizes, directs and controls activities associated with accounting and financial reporting, fixed asset management, materials management (including warehouse inventory processes at service centers and inventory contract management), facilities management, accounts payable, purchasing and contract compliance, performance measurement and reporting, cash and debt management, and/or fleet management.
8. Reviews processes and procedures regarding regulatory changes.
9. Provides expert accounting testimony in utility rate proceedings.
10. Analyzes employee and business needs and develop short and long range strategies, goals, and action plans to meet those needs.
11. Investigates and provides financial information to City Council, citizens, management, and staff.
12. Develops, prepares, reviews, and presents technical financial information in oral and written communication before the City Council, governmental and regulatory agencies, boards, and commissions.

#### Responsibilities - Supervisor and/or Leadership Exercised:

Responsible for the full range of supervisory activities including selection, training, evaluation, counseling, and recommendation for dismissal.

#### Knowledge, Skills, and Abilities:

Must possess required knowledge, skills, abilities and experience and be able to explain and demonstrate, with or without reasonable accommodations, that the essential functions of the job can be performed.

Knowledge of local, state, and federal law, and city ordinances.  
Knowledge of supervisory and managerial techniques and principles.  
Knowledge of budgeting methods and systems.  
Knowledge of financial accounting, reporting, and management.  
Knowledge of financial forecasting methods.  
Knowledge of utility financial and operational trends.  
Skill in oral and written communications.  
Skill in handling conflict and uncertain situations.  
Skill in collecting, analyzing, and interpreting applicable research data.  
Ability to work with frequent interruptions and changes in priorities  
Ability to train others.  
Ability to analyze and resolve irregular events.

#### Minimum Qualifications:

Graduation from an accredited four-year college or university with major course work in a field related Finance

Graduation from an accredited four-year college or university with major course work in a field related to utility finance, three (3) years of which include Accounting, or Economics, plus six (6) experience in a field related to utility finance, three (3) years of which include management in a utility or other similarly regulated entity.

A Master's in Accounting or Business Administration, or a five (5) year Accounting Degree, or a CPA designation may substitute for two (2) years of the experience requirement.

**Licenses and Certifications Required:**

None

This description is intended to indicate the kinds of tasks and levels of work difficulty required of the position given this title and shall not be construed as declaring what the specific duties and responsibilities of any particular position shall be. It is not intended to limit or in any way modify the right of management to assign, direct and control the work of employees under supervision. The listing of duties and responsibilities shall not be held to exclude other duties not mentioned that are of similar kind or level of difficulty.



## City of Austin - JOB DESCRIPTION



### Utility Financial Analyst Senior

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<b>FLSA:</b>	Standard/Exempt	<b>EEO Category:</b>	(20) Professionals
<b>Class Code:</b>	18963	<b>Salary Grade:</b>	A12
<b>Approved:</b>		<b>Last Revised:</b>	October 13, 2008

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#### **Purpose:**

Develop and prepare utility long range forecasts, revenue estimates, expenditure trends, economic forecasts, computer financial models and other complex financial and statistical analysis.

#### **Duties, Functions and Responsibilities:**

Essential duties and functions, pursuant to the Americans with Disabilities Act, may include the following. Other related duties may be assigned.

1. Develops the Utility's 10-year CIP budget, spending plan, and appropriation plan.
2. Develops the Utility's annual operating budget, business plan, performance measures and satisfaction surveys.
3. Provide coordination and assistance to City Controller's Office, City Budget Office, City Auditor's Office, internal and external auditors with utility related special projects, complex accounting issues, and audit requests.
4. Monitors state and federal regulatory processes and provides guidance to the utility regarding the financial impact of new and/or proposed legislation, regulations and standards.
5. Prepares or reviews financial reports by preparing or reviewing complex periodic internal and external financial documents, supporting schedules and financial reports to ensure accuracy; researching, compiling, monitoring, and summarizing current and historical financial and budget information and data; and reporting on financial and budget condition and trends.
6. Prepares and provides information necessary for the preparation of the City's annual financial report (CAFR) and Official Statements.
7. Develops and prepares complex spreadsheets and database models to calculate debt service requirements, equity financing ratios, cash reserve requirements, revenue bond debt refunding, to assist in the management of the Utility's cash balances, Commercial Paper Program, and Capital Recovery Fee Accounts..
8. Develops and prepares reports, analyses, and models necessary for the implementation of the Utility's Development Reimbursement program in accordance with established ordinances and procedures.
9. Develops cost of service studies and rate analysis for a utility
10. Develops and modifies computer models and statistical packages for utility financial planning including long-range forecasts and revenue forecasts.
11. Develops models for use in revenue and economic forecasts.
12. Provides support to utility rates and regulatory processes.
13. Provides analysis of utility customer characteristics, usage patterns, seasonal trends, and cost of service impacts.
14. Analyzes data/information for reports and cost estimates.

#### **Responsibilities - Supervisor and/or Leadership Exercised:**

May provide leadership, work assignments, evaluation, training, and guidance to others

#### **Knowledge, Skills, and Abilities:**

Must possess required knowledge, skills, abilities and experience and be able to explain and demonstrate, with or without reasonable accommodations, that the essential functions of the job can be performed.

Knowledge of utility ratemaking and cost of service study methodology.  
Knowledge of debt instruments, cash management and utility financing methods  
Knowledge of utility forecasting models and econometric studies, analysis and forecasting.  
Knowledge of cost benefit analysis, feasibility studies and net present value analysis methods.  
Knowledge of utility budgeting, financial planning or accounting.  
Knowledge of mathematical forecasting and estimating methods and techniques.  
Knowledge of research methods, survey techniques, statistical concepts and report writing.  
Ability to complete detailed financial and economic analyses.  
Ability to lead and/or facilitate meetings and workshops.  
Ability to work independently.  
Skill in generating and analyzing financial and statistical reports.

Skill in communicating effectively, orally and in writing.  
Skill in using computers and related software applications.  
Skill in performing quantitative analysis.

**Minimum Qualifications:**

Graduation from an accredited four-year college or university in a field related to Accounting, Business, Finance, Mathematics or Economics plus four (4) years of experience reviewing and analyzing financial/accounting records, two (2) years of which were for a utility or other similarly regulated entity.

A Master's in Accounting or Business Administration, or a five (5) year Accounting Degree, or a CPA designation may substitute for one (1) year of the financial/accounting experience requirement.

**Licenses and Certifications Required:**

None

This description is intended to indicate the kinds of tasks and levels of work difficulty required of the position given this title and shall not be construed as declaring what the specific duties and responsibilities of any particular position shall be. It is not intended to limit or in any way modify the right of management to assign, direct and control the work of employees under supervision. The listing of duties and responsibilities shall not be held to exclude other duties not mentioned that are of similar kind or level of difficulty.



## City of Austin - JOB DESCRIPTION



### Accounting Manager - Utility

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<b>FLSA:</b>	Standard/Exempt	<b>EEO Category:</b>	(20) Professionals
<b>Class Code:</b>	10055	<b>Salary Grade:</b>	AA6
<b>Approved:</b>		<b>Last Revised:</b>	January 30, 2008

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#### Purpose:

Under general direction, direct the activities of a division/section engaged in preparing and maintaining financial accounting records and reports for the utility.

#### Duties, Functions and Responsibilities:

Essential duties and functions, pursuant to the Americans with Disabilities Act, may include the following. Other related duties may be assigned.

1. Reviews and evaluates financial and accounting documents, reports, statements
2. Projects cost/revenue forecast to determine utility rate requirements.
3. Develops and/or review and evaluates fiscal impact statements.
4. Conducts routine fiscal reviews.
5. Develops and reviews financial indicators.
6. Develops and implements accounting systems.
7. Researches information as requested and/or needed.
8. Reviews and analyzes requisitions for personnel, purchases, etc.
9. Reviews and analyzes financial summaries & reports.
10. Reviews and evaluates various reports & studies.
11. Analyzes market and economic conditions.
12. Writes technical reports

#### Responsibilities - Supervisor and/or Leadership Exercised:

- Responsible for the full range of supervisory activities including selection, training, evaluation, counseling, and recommendation for dismissal

#### Knowledge, Skills, and Abilities:

Must possess required knowledge, skills, abilities and experience and be able to explain and demonstrate, with or without reasonable accommodations, that the essential functions of the job can be performed.

- Knowledge of bookkeeping procedures.
- Knowledge of the preparation process for financial statements in conformity with accepted auditing standards and accounting principles.
- Knowledge of financial reporting concepts and preferred business practices.
- Knowledge of supervisory and management techniques.
- Knowledge of the concepts for review and evaluation of internal control systems and auditing procedures.
- Knowledge of specialized industry accounting practices and procedures.
- Knowledge of internal control systems used for general accounting principles.
- Skill in establishing and maintaining good working relationships with other City employees and the public.
- Skill in analyzing, preparing, checking and balancing routine fiscal transactions and accounts.
- Skill in processing large volumes of numerical data.
- Skill in effective oral and/or written communication.
- Skill in analyzing and interpreting financial records.
- Skill in resolving problems or situations requiring the exercise of good judgment.
- Skill in analyzing complex financial data and proposing viable solutions.
- Skill in the use of mathematics in forecasting trends, cash flows, revenues and expenses.
- Skill in the application of cost benefit analysis, present value theory and computer fundamentals.
- Skill in determining needs, gathering, analyzing and presenting data to provide accurate information for management's use.
- Skill in anticipating and accurately predicting the results of alternate courses of action.
- Skill in compiling division reports.

- Skill in preparing accurate and complex financial statements.

**Minimum Qualifications:**

- Graduation from an accredited four-year college or university in a field related to the job, twenty-four (24) semester hours in Accounting, plus five (5) years of accounting experience of which two (2) years were for a utility or related work environment and one (1) year of which was in a lead capacity. Four (4) years toward a five (5) year Accounting Degree, plus five (5) years of accounting experience of which two (2) years were for a utility or related work environment and one (1) year of which was in a lead capacity
- A Master's in Accounting or Business Administration, or a five (5) year Accounting Degree, or a CPA designation may substitute for one (1) year of the accounting experience requirement.

**Licenses and Certifications Required:**

None.

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## City of Austin - JOB DESCRIPTION



### VP, Reg Affairs and Corp Comm

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FLSA:	Executives/2	EEO Category:	(10) Official/Adm
Class Code:	19039	Salary Grade:	E00
Approved:		Last Revised:	October 24, 2013

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#### Purpose:

Under nominal direction of the General Manager this job is responsible for all strategic regulatory, intergovernmental activities and corporate communications for the department of Austin Energy.

#### Duties, Functions and Responsibilities:

Essential duties and functions, pursuant to the Americans with Disabilities Act, may include the following. Other related duties may be assigned.

1. Directs, manages and serves as a formal liaison among all governing bodies at the Federal, State, Local levels, including all electric utility associations, councils, boards and stakeholder groups representing Austin Energy's business objectives.
2. Develop strategic regulatory public policy initiatives and programs that reflect Austin Energy's stance in the electric utility industry by working closely with the City's Intergovernmental Relations Office, Electric Utility Commission and City Council on changes in the regulatory or political arenas impacting AE.
3. Navigates the complexities of regulatory agencies to provide sound and reasonable recommendations to the GM and executive leadership team.
4. Responsible for keeping abreast of electric industry legislative trends, including monitoring and interactions with the Electric Reliability Council of Texas (ERCOT) and the Public Utility Commission of Texas (PUC), to provide leadership and direction on regulatory issues impacting rates, the overall business model and other relevant issues.
5. Responsible for the coordination and support of Austin Energy's participation with industry organizations such as Large Public Power Council (LPPC), American Public Power Association (APPA), Texas Public Power Association (TPPA) to promote Austin Energy's vision, mission and objectives.
6. Provides executive leadership, as a subject matter expert on regulatory matters, by representing Austin Energy in a positive light to residential, commercial, and industrial customers, public power utilities, municipalities, counties and other stakeholder groups served or impacted by policy decisions at Austin Energy.
7. Develops and implements policies and practices that balance the reliability and profitability of Austin Energy with electric industry regulatory requirements.
8. Develops and implements strong communication standards for staff's participation in all regulatory matters by ensuring
9. accurate data that is consistent and reflects the overall objectives of the utility.
10. Responsible for communications with City Council, stakeholders, and other public officials in support of Austin Energy and City of Austin strategic objectives.
11. Responsible for participation in state regulatory agency proceedings to include contested cases, rulemakings, enforcement proceedings and other policy investigations.
12. Oversee the corporate communications and marketing policies that reflect Austin Energy's strategic and operational initiatives by developing a progressive social media network and utilizing communication technologies to better inform our customers about the utility business.
13. Provides executive level oversight for all communications which include, but not limited to reports, presentations, policy statements to the media, council, commissions, regulatory or professional organizations affiliated with Austin Energy.
14. Develops and monitors O&M and CIP budgets.
15. Maintains up-to-date knowledge of trends and practices within the electric utility industry.
16. Ensures the responsibilities, accountabilities and authority of direct reports and unit supervisors are defined and understood.
17. May represent the General Manager in meetings.

#### Responsibilities - Supervisor and/or Leadership Exercised:

Responsible for the full range of supervisory activities including selection, training, evaluation, counseling, and recommendation for dismissal.

#### Knowledge, Skills, and Abilities:

Must possess required knowledge, skills, abilities and experience and be able to explain and demonstrate, with or

without reasonable accommodations, that the essential functions of the job can be performed.

Knowledge of the electric utility processes, practices, issues and policies  
 Knowledge of administrative, procedural and substantive rules and regulations impacting public power  
 Demonstrated mastery of managing interpersonal skills at multiple levels  
 Demonstrated mastery about electric utility regulatory matters at the federal, state and local levels  
 Demonstrated understanding of administrative and procedural rule making processes.  
 Knowledge of federal, state and local legislative initiatives impacting the utility  
 Knowledge of executive leadership principles to include development of subordinate staff  
 Knowledge of budget methods and systems  
 Knowledge about social media communications to promote program initiatives  
 Skill in handling conflict and uncertain situations, analyze and resolve irregular events  
 Skill in structuring a complex organization to meet changing challenges

**Minimum Qualifications:**

Graduation from an accredited four-year college or university with major course work in Business, Public Administration, Public Policy, Economics or a related field related to the job, plus five (5) years related electric utility experience, (2) of which need to be in a supervisory capacity.

Masters Degree may substitute for two (2) years of the required experience up to a maximum of two (2) years.

**Licenses and Certifications Required:**

None

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## City of Austin - JOB DESCRIPTION



### Austin Energy Utility Strategist

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<b>FLSA:</b>	Standard/Exempt	<b>EEO Category:</b>	(20) Professionals
<b>Class Code:</b>	18920	<b>Salary Grade:</b>	ZS3
<b>Approved:</b>	March 17, 2008	<b>Last Revised:</b>	April 29, 2009

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#### Purpose:

Under the minimal direction this position is responsible for conducting complex research and analysis related to the energy industry in support of Austin Energy's strategic and business short and long-range planning initiatives for the executive management team.

#### Duties, Functions and Responsibilities:

Essential duties and functions, pursuant to the Americans with Disabilities Act, may include the following. Other related duties may be assigned.

1. Assists the Chief Strategy Officer in leading executive management through the strategic and/or business planning process by conducting complex research and analysis related to the energy industry and the development of Austin Energy's strategic plan.
2. Gathers, conducts ad hoc research in areas including technology and alternative business models, trend analysis business intelligence related to the energy industry and Austin Energy's strategic planning initiatives and to define and forecast industry trends.
3. Assists executive management in defining and identifying enterprise development opportunities.
4. Assists executive management in developing implementing key performance measures, metrics, and performance targets. Reviews, develops and implements short and long-range strategic and business plans and updates. Reviews, develops, and examines business cases and models including alternative business, technology, energy models and providing alternative solutions.
5. Analyzes current strategic and business planning process and makes recommendations by developing solutions to critical business issues and presents alternatives to Chief Strategy Officer.
6. Leads multiple, cross-functional teams, large projects and initiatives. Conducts research studies using questionnaires, surveys, interviews, focus groups or other methods as needed.
7. Compiles and analyzes data to discover trends or discrepancies. Writes, documents, edits and/or reviews reports and presentations to executive management. Verifies the accuracy and completeness of strategic planning reports and updates.
8. Assists in defining and developing departmental mission, values, strategies and objectives. Assists in developing planning and forecasting models or scenarios.
9. Plans, tracks and communicates project or program activity status to executive management and other key stakeholders including Chief Strategy Officer, executive management, management team and employees.
10. Develops project schedules and charts using project management software. Documents processes utilizing flowchart methodologies. Defines and directs complex data analysis.

#### Responsibilities - Supervisor and/or Leadership Exercised:

- May provide leadership, work assignments, evaluation, training, and guidance to others

#### Knowledge, Skills, and Abilities:

Must possess required knowledge, skills, abilities and experience and be able to explain and demonstrate, with or without reasonable accommodations, that the essential functions of the job can be performed.

- Knowledge of applicable electric utility processes, techniques, and methods.
- Knowledge of sustainable energy technologies, methodologies, and business practices.
- Knowledge of strategic planning principles and methodologies.
- Knowledge of business model, process development or business case development principles.
- Knowledge of competitive business practices and analysis.
- Knowledge of reporting concepts and preferred business practices.
- Knowledge of statistical methods and principals.
- Knowledge of internal control systems.
- Knowledge of applicable computer software.
- Skill in oral and written communication.

- Skill in handling multiple tasks and prioritizing.
- Skill in using computers and related software applications.
- Skill in data analysis and problem solving.
- Ability to quickly recognize and resolve irregular events.
- Ability to effectively manage or lead project teams.
- Ability to establish effective communication and working relationships with city employees and the public.

**Minimum Qualifications:**

- Graduation from an accredited four-year college or university, plus four (4) years of related work experience.
- A Master's degree may substitute for experience up to two (2) years.

**Licenses and Certifications Required:**

None.

This description is intended to indicate the kinds of tasks and levels of work difficulty required of the position given this title and shall not be construed as declaring what the specific duties and responsibilities of any particular position shall be. It is not intended to limit or in any way modify the right of management to assign, direct and control the work of employees under supervision. The listing of duties and responsibilities shall not be held to exclude other duties not mentioned that are of similar kind or level of difficulty.



## City of Austin - JOB DESCRIPTION



### Public Information Specialist Senior

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<b>FLSA:</b>	Standard/Non-Exempt	<b>EEO Category:</b>	(50) Para-Prof
<b>Class Code:</b>	17372	<b>Salary Grade:</b>	QD3
<b>Approved:</b>	August 01, 2006	<b>Last Revised:</b>	April 08, 2012

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#### Purpose:

Under general supervision, responsible for the dissemination of news and information to the general public, City employees and the media regarding departmental and/or Citywide programs. These duties may contribute to any or all of the following areas: marketing, public relations, media relations, and publication of documents for internal and external education and communication.

#### Duties, Functions and Responsibilities:

Essential duties and functions, pursuant to the Americans with Disabilities Act, may include the following. Other related duties may be assigned.

1. Works on assignments that are complex in nature where considerable judgment and initiative are required in resolving problems and making recommendations. Primary responsibility for larger individual projects or act as an account representative for client departments and programs.
2. Develops long-range strategic plans.
3. Writes plans, organizes, directs, coordinates and edits articles for publication in a variety of forms, including electronic publication.
4. Coordinates all aspects of production of marketing materials.
5. Performs media relations duties to include: media buying, news releases, and fielding questions from media.
6. Coordinates public relations duties to include: public and school education, presentations, tours of public facilities, and requests for information from the general public.
7. Designs, researches, writes and edits newsletters and releases for internal or external use.
8. Produces public service announcements and videos for promotional use.

#### Responsibilities - Supervisor and/or Leadership Exercised:

May train and lead others.

#### Knowledge, Skills, and Abilities:

Must possess required knowledge, skills, abilities and experience and be able to explain and demonstrate, with or without reasonable accommodations, that the essential functions of the job can be performed.

Knowledge of public information, marketing, public relations, media relations programs.

Knowledge of the functions and organization of municipal government, to include the relationships between departments, divisions and agencies.

Knowledge of the principles associated with the role of meeting the necessary standards of customer service.

Skill in oral and written communication.

Skill in handling multiple tasks and prioritizing.

Skill in using computers and related software.

Skill in data analysis and problem solving.

Skill in planning and organizing.

Ability to interpret policies and guidelines.

Ability to write articles for publication.

Ability to work with frequent interruptions and changes in priorities.

Ability to lead and train others.

Ability to establish and maintain good working relationships with other City employees and the public.

#### Minimum Qualifications:

Graduation from an accredited four (4) college or university with major coursework in Marketing, Public Relations, Journalism, Advertising or related field plus four (4) years of progressive experience in developing and implementing programs of public information, one (1) of which was in a team leader/coordinator capacity.

Experience may substitute for the education up to the maximum of four (4) years.

#### Licenses and Certifications Required:

None

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## City of Austin - JOB DESCRIPTION



### Customer Energy Solutions Vice President

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<b>FLSA:</b>	Executives/2	<b>EEO Category:</b>	(10) Official/Adm
<b>Class Code:</b>	19034	<b>Salary Grade:</b>	E00
<b>Approved:</b>	August 21, 2001	<b>Last Revised:</b>	December 05, 2013

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#### **Purpose:**

Under nominal direction of the General Manager, this position is responsible for the strategic direction and development of energy efficiency practices integrating the stewardship of the environment with reliable electric service delivery and quality customer service. Included in the scope of this job is the responsibility for Energy Efficiency Services, Emerging Transportation Technologies, Green Building, Key Accounts and Market Research/Product Development, and other related activities that may develop in the future.

#### **Duties, Functions and Responsibilities:**

Essential duties and functions, pursuant to the Americans with Disabilities Act, may include the following. Other related duties may be assigned.

1. Provides and promotes a comprehensive energy program that integrates economic vitality for AE, social sustainability and environmental stewardship goals and emphasizes the continued reliability standards for Austin Energy.
2. Develops, designs and implements measures and metrics for the distributed energy services operations, which supports the transformation of the utility to embrace options for clean energy resources.
3. Ensures strategic effective program accountabilities are in place by developing and implementing measure and metrics that enhance cost effectiveness and the overall operation efficiencies of the electric utility.
4. Responsible for the integration and evaluation of the strategic and tactical approaches necessary to move the AE Generation Plan forward to meet the business needs of the utility and the demands of the customers, and manage the distributed generation portfolio.
5. Serves as an advocate for energy conservation and sustainability initiatives within the electric utility environment, representing the demand side management strategies in a positive light within our community and to key stakeholders. Provides guidance and recommendations on such matters to the GM and Executive Leadership team.
6. Promotes the conservation and green building programs, by setting reliable and verifiable program metrics to enhance both the strategic and financial goals of the utility.
7. Serves as the executive sponsor for the Key Account program to strengthen customer service and develop and implement accountabilities that compliment the vision, mission and overall strategies of AE for all residential, commercial and industrial customers.
8. Oversees the development of new products and services including monitoring promotional and outreach initiatives to create value for the customers and identify new energy technologies that serve as viable business opportunities for the utility. Measure and track the performance of the new products or services to ensure they meet identified corporate objectives.
9. Oversees the development of research and data analysis to support business decisions and the creation of programs, products, services across the utility.
10. Understands and keeps pace with emerging trends in the areas of climate protection, solar, wind, transportation and sustainability initiatives aligned with the future goals and objectives of AE.
11. Develops short and long term spending plans and monitors O&M and CIP budgets. Prepares annual technical and financial reports.
12. Maintains up-to-date knowledge of trends and practices within the electric utility industry.
13. Ensures the responsibilities, accountabilities and authority of direct reports and unit supervisors are defined and understood.
14. May represent the General Manager in meetings with community groups and industry partners.

#### **Responsibilities - Supervisor and/or Leadership Exercised:**

Responsible for the full range of supervisory activities including selection, training, evaluation, counseling, and recommendation for dismissal.

#### **Knowledge, Skills, and Abilities:**

Must possess required knowledge, skills, abilities and experience and be able to explain and demonstrate, with or without reasonable accommodations, that the essential functions of the job can be performed.

Knowledge of electric utility processes, practices, issues and policies.  
 Knowledge of alternative generation theories, plans, and models.  
 Understand demand side management tools, techniques and approaches.  
 Demonstrate mastery of managing interpersonal skills at multiple levels.  
 Knowledge of local, state, and federal laws, and city ordinances.  
 Knowledge of executive leadership principles to include development of subordinate staff.  
 Knowledge of budget methods and systems.  
 Knowledge about social media communications to promote program initiatives.  
 Knowledge of research and data utilization in decision making processes.  
 Skill in handling conflict and uncertain situations.  
 Skill in structuring a complex organization to meet changing challenges.  
 Skill in managing and optimizing multiple product lines to achieve identified corporate goals.  
 Skill in collecting, analyzing and interpreting applicable research data.  
 Ability to work with frequent interruptions and changes in priorities.  
 Ability to analyze and resolve irregular events.

**Minimum Qualifications:**

Graduation from an accredited four-year college or university with major coursework in engineering, business, economics, public administration, public policy, or in a related field is required. Eight (8) years of electric utility experience plus five (5) years of management experience, two (2) years of which are at the level of a senior manager or executive, is also required.

**Licenses and Certifications Required:**

None.

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## City of Austin - JOB DESCRIPTION



### Solar Program Manager

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<b>FLSA:</b>	Standard/Exempt	<b>EEO Category:</b>	(20) Professionals
<b>Class Code:</b>	12710	<b>Salary Grade:</b>	ZT9
<b>Approved:</b>	July 08, 2013	<b>Last Revised:</b>	July 09, 2013

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#### **Purpose:**

Under minimal supervision, managers and oversees the development and operation of distributed solar energy projects.

#### **Duties, Functions and Responsibilities:**

Essential duties and functions, pursuant to the Americans with Disabilities Act, may include the following. Other related duties may be assigned.

1. Develops distributed solar generation programs that meets Austin Energy's strategic objectives. Responsible for the program management of activities associated with solar programs, including rebates, incentive levels, and tariff design and customer satisfaction metrics.
2. Monitors the efficiency of the operations, contractual agreements, financial integrity as well as environmental and regulatory compliance of the programs.
3. Coordinates feasibility studies and project development activities with cross functional resources, peers and outside consultants.
4. Analyzes plans construction contract specifications, terms conditions and relevant building codes to determine project requirements.
5. Formulates policies, guidelines and procedures to incorporate the management of working closely with both the power generation and power delivery business units of Austin Energy.
6. Evaluates and recommends changes to operational programs at various stages to the executive staff as it relates to the development, maintenance or curtailment of large scale renewable projects.
7. Identifies and develops relationships with stakeholders, partners, community leaders, boards, commissions and other interested parties.
8. Manages and monitors O&M and CIP budgets including preparing short and long-term spending plans.
9. Provides industry specific reports, writes articles, delivers presentations to promote services, exchanges ideas and accomplishes objectives.

#### **Responsibilities - Supervisor and/or Leadership Exercised:**

Responsible for the full range of supervisory activities including selection, training, evaluation, counseling, and recommendation for dismissal.

#### **Knowledge, Skills, and Abilities:**

Must possess required knowledge, skills, abilities and experience and be able to explain and demonstrate, with or without reasonable accommodations, that the essential functions of the job can be performed.

Knowledge of energy efficiency and renewable energy technologies.

Knowledge of regulatory requirements at the federal, state and local level.

Knowledge of reporting concepts and preferred business practices.

Knowledge of fiscal planning and budget preparation.

Knowledge of project management and internal control concepts and practices.

Skill in managing renewable generation development and operational activities and systems.

Skill in understanding and managing financing approaches and partnership agreements associated with the electric utility industry and renewable energy projects.

Skill in managing risks and land acquisition.

Skill in mediation and negotiating contractual agreements.

Skill in oral and written communications.

Skill in handling and prioritizing multiple strategic program initiatives.

Skill in using computers and related software applications.

Skill in data analysis and problem solving.

Ability to understand and explain industry trends, processes, and procedures.

Ability to establish and maintain effective communication and working relationships with stakeholders, partners, community leaders, boards commissions, city employees and the public.

**Minimum Qualifications:**

Graduation from an accredited four-year college or university, plus five (5) years experience in renewable energy project development, with an understanding of both regulated and deregulated electric markets, two (2) years of which were in a program or project management capacity.

**Licenses and Certifications Required:**

None

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## City of Austin - JOB DESCRIPTION



### Environmental Program Coordinator

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<b>FLSA:</b>	Standard/Exempt	<b>EEO Category:</b>	(20) Professionals
<b>Class Code:</b>	13658	<b>Salary Grade:</b>	IA1
<b>Approved:</b>	July 22, 1998	<b>Last Revised:</b>	October 21, 2014

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#### **Purpose:**

Under minimal direction, coordinates interdepartmental and interagency environmental and/or conservation programs or projects, serves as a liaison for interdepartmental and interagency environmental/conservation issues, and coordinates and supports the environmental/conservation activities of a division/section for various projects and programs.

#### **Duties, Functions and Responsibilities:**

Essential duties and functions, pursuant to the Americans with Disabilities Act, may include the following. Other related duties may be assigned.

- 1.Serve as coordinator or liaison for interdepartmental and interagency issues and projects
- 2.Communicate project and program information to internal and external customers
- 3.Assist in management or resolution of interdepartmental and interagency conflicts
- 4.Facilitate closure of litigated cases
- 5.Negotiate permit and/or plan revisions with project engineers and contractors
- 6.Develop/establish service agreements with other programs, departments and agencies
- 7.Develop and manage contracts
- 8.Manage and review environmental remediation plans
- 9.Provide technical advice and assistance to City management, staff, contractors, and businesses
- 10.Evaluate projects, programs and criteria
- 11.Assist in the development and adoption of new City Code regulations, policies and procedures
- 12.Assist in development of new/revised interdepartmental or interagency protocol or procedures
- 13.Review, evaluate and recommend revisions to City Code, rules, policies and legislative bills
- 14.Review, evaluate and recommend revisions to technical reports, studies and contract documents
- 15.Review site plans, environmental site assessments and stormwater/effluent discharge proposals
- 16.Evaluate existing conditions, collect samples, interpret sampling data, and develop corrective action plans
- 17.Educate and conduct presentations to public
- 18.Assist in the development of short and long range plans
- 19.Prepare written reports, memoranda, letters, RFP/RFQ/IFBs and Standard Operation Procedures
- 20.Assist in the development and monitoring of budgets
- 21.Attend City Council, Board, Commission Meetings, etc. as a City/Department staff representative
- 22.Respond to requests from the media

#### **Responsibilities - Supervisor and/or Leadership Exercised:**

May provide leadership, work assignments, evaluation, training, and guidance to others

#### **Knowledge, Skills, and Abilities:**

Must possess required knowledge, skills, abilities and experience and be able to explain and demonstrate, with or without reasonable accommodations, that the essential functions of the job can be performed.

- Knowledge of applicable processes, techniques, and methods.
- Knowledge of city practice, policy, and procedures.
- Knowledge of supervisory and managerial techniques and principles.
- Skill in handling conflict and uncertain situations.
- Skill in handling multiple tasks and prioritizing.
- Skill in using computers and related software applications.
- Skill in data analysis and problem solving.
- Ability to establish and maintain effective communication and working relationships with city employees and the public.
- Ability to work with frequent interruptions and changes in priorities.
- Ability to train others.

**Minimum Qualifications:**

Graduation from an accredited four-year college or university with major course work in a field related to Environmental Science, Life Science, Biology, Chemistry, Engineering, Landscape Architecture, Public Administration, Business Administration, Planning, plus six (6) years of experience in a related field.

Master's degree may substitute for experience up to two (2) years.

Related experience may substitute for education up to four (4) years

**Licenses and Certifications Required:**

None

This description is intended to indicate the kinds of tasks and levels of work difficulty required of the position given this title and shall not be construed as declaring what the specific duties and responsibilities of any particular position shall be. It is not intended to limit or in any way modify the right of management to assign, direct and control the work of employees under supervision. The listing of duties and responsibilities shall not be held to exclude other duties not mentioned that are of similar kind or level of difficulty.



## City of Austin - JOB DESCRIPTION



### Director, Energy Efficiency Services

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<b>FLSA:</b>	Standard/Exempt	<b>EEO Category:</b>	(20) Professionals
<b>Class Code:</b>	12704	<b>Salary Grade:</b>	ZQ9
<b>Approved:</b>	June 15, 2005	<b>Last Revised:</b>	August 05, 2013

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#### **Purpose:**

Under nominal direction of the Deputy General Manager, manages, oversees and directs the implementation of Austin Energy's Demand-Side Management (DSM) residential, commercial, and industrial energy efficiency projects and programs.

#### **Duties, Functions and Responsibilities:**

Essential duties and functions, pursuant to the Americans with Disabilities Act, may include the following. Other related duties may be assigned.

1. Plans, directs, and coordinates the development and delivery of a range of technical program services to improve energy efficiency in new and existing residential, commercial and industrial building.
2. Directs and manages the performance of energy audits and engineering feasibility studies; reviews and evaluates recommendations of building design reviews and studies, and cost-effectiveness comparisons of end-use technologies.
3. Manages annual O&M, CIP and incentive budgets including preparing short and long-term spending plans.
4. Prepares and presents annual results-of-operations reports for Austin Energy management and public advisory committees.
5. Manages promotional and outreach efforts to establish partnerships with contractors, vendors and trade allies to enhance customer services and participation to meet Austin Energy's energy efficiency goals.
6. Formulates specific plan objectives to achieve desirable electric load shape changes through energy efficiency and load management programs and projects.
7. Directs technical and planning process elements for evaluating alternative energy efficiency program initiatives.

#### **Responsibilities - Supervisor and/or Leadership Exercised:**

- Responsible for the full range of supervisory activities including selection, training, evaluation, counseling, and recommendation for dismissal.

#### **Knowledge, Skills, and Abilities:**

Must possess required knowledge, skills, abilities and experience and be able to explain and demonstrate, with or without reasonable accommodations, that the essential functions of the job can be performed.

- Knowledge and experience in management of energy efficiency programs.
- Knowledge of energy efficiency technologies.
- Knowledge of Federal, State, and local laws, ordinances, and policies.
- Knowledge of city practice, policy, and procedure
- Knowledge of supervisory and managerial techniques and principles.
- Knowledge of reporting concepts and preferred business practices.
- Knowledge of budgeting and purchasing processes and systems.
- Knowledge of project management and internal control concepts and practices.
- Skill in oral and written communications.
- Skill in handling hostile conflict and uncertain situations.
- Skill in handling multiple tasks and prioritizing.
- Skill in using computers and related software applications.
- Skill in data analysis and problem solving.
- Ability to work with frequent interruptions and changes in priorities.
- Ability to quickly recognize and analyze irregular events.
- Ability to establish and maintain effective communication and working relationships with city employees, the public and contractors

**Minimum Qualifications:**

- Graduation from an accredited four-year college or university with major coursework in Business Administration, Public Administration, Engineering, or in a field related to the job, plus seven (7) years related experience, two (2) years of which were in a supervisory or managerial capacity.
- Education may substitute for experience up to two (2) years.

**Licenses and Certifications Required:**

None.

This description is intended to indicate the kinds of tasks and levels of work difficulty required of the position given this title and shall not be construed as declaring what the specific duties and responsibilities of any particular position shall be. It is not intended to limit or in any way modify the right of management to assign, direct and control the work of employees under supervision. The listing of duties and responsibilities shall not be held to exclude other duties not mentioned that are of similar kind or level of difficulty.



## City of Austin - JOB DESCRIPTION



### Consulting Engineer

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<b>FLSA:</b>	Standard/Exempt	<b>EEO Category:</b>	(20) Professionals
<b>Class Code:</b>	12002	<b>Salary Grade:</b>	HA1
<b>Approved:</b>	December 16, 1997	<b>Last Revised:</b>	March 30, 2011

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#### Purpose:

Under nominal direction, accountable for interpreting, organizing, executing, and coordinating assignments. Plans and develops engineering projects concerned with unique or controversial problems which have an important effect on major City programs and/or projects. Serves as technical expert in related area.

#### Duties, Functions and Responsibilities:

Essential duties and functions, pursuant to the Americans with Disabilities Act, may include the following. Other related duties may be assigned.

1. Develops or oversees development of technical specifications and standards by applying knowledge of the principles and practices of discipline engineering, including the methods, materials, equipment and techniques used. Review, analyze and interpret plans, specifications, contracts and other related documents.
2. Manages and coordinates programs/projects by reviewing and/or monitors projects/programs including the review of plans and development proposals for impacts related to project/program
3. Plans, researches, designs, and implements engineering studies and projects and/or program areas by applying advance technical knowledge of engineering discipline.
4. Manages and negotiates contracts by reviewing monthly progress reports, verifying final quantities and costs, compiling requisite documentation, reviewing change orders, and auditing as-built records. Acts as a liaison among consultants, contractors, subcontractors, manufacturers, fabricators or suppliers and City. Negotiates problems of changes, errors or deficiencies and ensures compliance with project specifications and requirements
5. Interacts with internal and external customers to ensure requirements and needs are satisfied
6. Reviews plans and provides recommendation changes, solutions, or implementation.
7. Monitors projects for regulatory compliance by providing consultation and determinations in matters involving application and interpretation of regulations and policies.
8. Manages/leads teams of technical personnel including assigning and monitoring tasks. Provides advanced technical training to staff and field personnel by reviewing business needs, evaluation of personnel, creating and applying training documentation, presentation and analysis of training.
9. Develops and monitors budget of projects. Assist in develop, managing and submit proposed budget forecast planning for short and long term city planning
10. Provides a high level of engineering and technical advice and direction. Possesses ability to troubleshoot advanced technical problems. Possesses ability to perform advanced engineering design

#### Responsibilities - Supervisor and/or Leadership Exercised:

May provide leadership, work assignments, evaluation, training, and guidance to others.

#### Knowledge, Skills, and Abilities:

Must possess required knowledge, skills, abilities and experience and be able to explain and demonstrate, with or without reasonable accommodations, that the essential functions of the job can be performed.

Advanced knowledge of diversified, fundamental scientific and civil engineering concepts, phenomena, and relationships, and utilize such changes in solution of theoretical or practical civil engineering problems;  
Knowledge of advanced mathematical techniques such as trigonometry, calculus, and coordinate geometry  
Knowledge of modern methods, materials, and techniques of assigned discipline  
Knowledge of one or more of the following disciplines: Civil, Environmental, Structural, Architectural, Mechanical and/or Electrical engineering terminology and techniques.  
Knowledge of City of Austin budget planning, purchasing and contract policies and procedures  
Knowledge of applicability of established engineering principles and methods and solutions.  
Knowledge of phases of the plans review and inspections processes.  
Knowledge of preparation of cost estimates and engineering and feasibility reports  
Knowledge of regulatory requirements within the local and state ordinances and laws  
Skill in oral and written technical and/or general communication including preparation of written reports

Skill in negotiations and handling conflict resolution

Ability to perform more complex engineering computations, calculus, geometry, and trigonometry, rapidly and accurately.

Ability to communicate and provide direction to peers and assigned personnel

Ability to organize, analyze, interpret, and evaluate scientific civil engineering problems and provide practical, cost effective solutions;

Ability to observe, compare, or monitor objects and data to determine compliance with prescribed operating or safety standards.

Ability to use graphic instructions, such as blue prints, schematic drawings, layouts, or other visual aids.

**Minimum Qualifications:**

Graduation from an accredited four-year college or university with major course work in a field related to engineering, plus eight (8) years engineering experience acquired either before and/or after licensing as a professional engineer.

**Licenses and Certifications Required:**

State of Texas Professional Engineer License

This description is intended to indicate the kinds of tasks and levels of work difficulty required of the position given this title and shall not be construed as declaring what the specific duties and responsibilities of any particular position shall be. It is not intended to limit or in any way modify the right of management to assign, direct and control the work of employees under supervision. The listing of duties and responsibilities shall not be held to exclude other duties not mentioned that are of similar kind or level of difficulty.



TLSC 1-5. AE originally announced that it would file its rate filing package on January 11, 2016, but then on January 11, 2016 announced delaying the filing stating "The rate filing package will not be released until later next week due to some administrative timelines that can't be changed. We intend to release it by January 22<sup>nd</sup>." Please explain what the administrative timelines were that could not be changed.

ANSWER:

Internal administrative procedures related to quality control required the change in planned release of the rate filing package.

Prepared by: BE  
Sponsored by: Mark Dreyfus

TLSC 1-6. On January 22, 2016, AE announced a further filing delay stating "During a quality control review of Austin Energy's Tariff Package, an error was discovered in the cost of service model that warrants correction prior to publication. Austin Energy expects to release the Tariff Package on Monday January 25, 2016." Please identify the error that was discovered, where the error was located in the rate filing package (including named references and bates stamp numbers), what the error was, what was the original data or information included in the cost of service model that needed to be corrected and what are the corrected data or information that was included.

ANSWER:

By agreement of the parties, the response to this question has been modified.

During a final quality control review of the cost of service model, it was discovered that the model employed a 12 coincident peak ("12CP") production cost allocation factor using Austin Energy's system peak instead of ERCOT's 12CP. As a result a new model run was required to switch the allocation factor to the ERCOT 12 CP and figures throughout the Report to Council narrative were updated to reflect the corrected cost allocation among the customer classes.

Prepared by: BE  
Sponsored by: Mark Dombroski

TLSC 1-7. Please explain why the differing rate time periods for the Load Shifting Voltage Discount Rider do not match the corresponding Time of Use On-Peak and Off-Peak differing rate time periods for all other customers. In your explanation, please provide an economic justification for the difference. Please also provide the amount of discount AE is providing to these customers. (Ref. Bates Stamp pp. 711, 717, 725, 742 of rate filing package.)

ANSWER:

Austin Energy currently has suspended all Time-of-Use (TOU) rates, with the exception of the residential pilot TOU, as mention in the narrative of 'Austin Energy's Tariff Package: 2015 Cost of Service Study and Proposal to Change Base Electric Rates' under Chapter 6. Therefore, there are no 'corresponding time of use on-peak and off-peak differing rate time periods for all other customers'.

Any economic justification would be due to the load characteristics (ability to shift a minimum of 30 percent of the customer's normal annual monthly average on-peak load) and how this distinct customer class uses the system. In addition, this distinct customer class would help reduce the cost to Austin Energy's customers through fuel costs shown in Figure 6.21 under Section 6.7.1 within the narrative of 'Austin Energy's Tariff Package: 2015 Cost of Service Study and Proposal to Change Base Electric Rates' by shifting load to lower cost periods, plus reduce the Regulatory charge for which Austin Energy is charge their portion of transmission based on ERCOT's summer 4CP. Any savings are passed back to Austin Energy's customers through reduced fuel and regulatory costs, then they would otherwise have experienced. Residential customers, typically, have peakier load curves due to the way they use the system (higher loads in the morning and evenings and greater loads in the summer months due to air-conditioning).

A reduction is strictly based on technology used, load actually shifted, and operations applied; for which the majority of underlining rate schedules are currently over their cost of service since it only applies to non-residential customer classes. The 'load shifting voltage discount rider' was designed to be as close to revenue-neutral compared to the current Thermal Energy Storage rate schedule revenue.

Prepared by: CM  
Sponsored by: Mark Dombroski

TLSC 1-8. Please list each consultant AE has worked with in developing its rate filing package. If the consultant is considered a business, please identify the person(s) who worked with Austin Energy (Ref. p. 2-, Bates Stamp p. 013).

ANSWER:

Please see Austin Energy's Response to TLSC RFI No. 1-9.

Prepared by: GR  
Sponsored by: Mark Dreyfus

TLSC 1-9. For each consultant and person listed in No. 1-8, please provide the following:

- a. The name, business address, and phone number of the person;
- b. The name, address and phone number of the business, if any, the person works for or with or serves as an officer in;
- c. A resume of the person that includes the information requested in No. 1-2(b) above;
- d. The parts of the rate filing package the person worked on or the subject matter of rate issues that are addressed in the rate filing package;
- e. Any communications between the consultant and person and Austin Energy, its employees, agents, consultants, general manager, manager, and officers.

ANSWER:

In response to sub-questions (a), (b), and (d), please see Attachment 1.

In response to sub-question (c), please see Attachment 2.

By agreement of the parties, Austin Energy will be responding to (e) on February 24.

Prepared by: GR  
Sponsored by: Mark Dreyfus

Name	Title	Work Phone	Address	Primary Areas of Work (see Legend)
<b>NewGen Strategies &amp; Solutions, LLC</b>				
Joe Mancinelli	President-Energy Practice and GM	(720) 633-9509	225 Union Boulevard, Suite 305 Lakewood, CO 80228	COS, RD, SVCC, SCS, FRS
Grant Rabon	Executive Consultant	(512) 900-8232	3420 Executive Center Drive, Suite 165 Austin, TX 78731	COS, RD, SVCC, SCS, FRS
Jack Stowe	Director	(512) 900-8195	3420 Executive Center Drive, Suite 165 Austin, TX 78731	FRS
Nancy Hughes	Director	(425) 605-5332	20014 SE 19th Street, Sammamish, Washington 98075	NNDCS
Max Bernt	Consultant	(720) 633-9514	225 Union Boulevard, Suite 305 Lakewood, CO 80228	COS, RD, SVCC
Jessica Terry	Consultant	(720) 633-9514	225 Union Boulevard, Suite 305 Lakewood, CO 80228	SCS, FRS
Stephanie Crain	Consultant	(512) 900-8232	3420 Executive Center Drive, Suite 165 Austin, TX 78731	FRS
<b>AECOM (subcontractor to NewGen)</b>				
Craig Niedermeier	Program Manager	(512) 457-7849	9400 Amberglen Boulevard, Austin, TX 78729	NNDCS
Fred Dymek	Senior Power Plant Engineer	(845) 590-0417	23 Suellen Road, Islip, NY 11751	NNDCS
William Bachman	Senior Cost Estimator	(864) 234-3000	10 Patewood Drive, Building VI, Suite 500, Greenville, SC 29615	NNDCS
Martin Hammer	Chief Cost Estimator	(804) 515-8533	4840 Cox Road, Glen Allen, VA 23060	NNDCS
Gayatri Bitracanti	Project Engineer	(512) 457-7784	9400 Amberglen Boulevard, Austin, TX 78729	NNDCS
<b>The Vertex Companies, Inc. (subcontractor to NewGen)</b>				
Greg Sampson	Vice President	(781) 952-6000	400 Libbey Industrial Pkwy Weymouth, MA 02189	NNDCS
<b>Encotech Engineering Consultants, Inc. (subcontractor to NewGen)</b>				
Carl Holiday	Senior Project Manager	(512) 338-1101	8500 Bluffstone Cove, Suite B-103 Austin, Texas 78759	NNDCS
Sharon Bickford	Senior Electrical Engineer/Project Manager	(512) 338-1101	8500 Bluffstone Cove, Suite B-103 Austin, Texas 78759	NNDCS
Rachel Hawkins	Project Engineer/Project Manager	(512) 338-1101	8500 Bluffstone Cove, Suite B-103 Austin, Texas 78759	NNDCS
Hamzah Khataw	Graduate Engineer	(512) 338-1101	8500 Bluffstone Cove, Suite B-103 Austin, Texas 78759	NNDCS

**Legend:**

COS	Cost of Service analysis
RD	Rate Design
SVCC	Secondary Voltage Customer Class analysis - assess the current delineations between secondary voltage customer classes and recommend adjustments (e.g., 0 - 10 kW, 10 - 300 kW, > 300 kW)
SCS	Small Commercial Study - evaluate and benchmark the rate structure appropriate for small commercial customers
FRS	Financial Reserves Study
NNDCS	Non-Nuclear Decommissioning Cost Study - a subset of the Financial Reserves Study



**Joseph Mancinelli**  
General Manager and President, Energy Practice  
[jmancinelli@newgenstrategies.net](mailto:jmancinelli@newgenstrategies.net)

Joseph Mancinelli has over 25 years of experience as a utility consultant serving the public utility industry; he is President and General Manager of NewGen Strategies and Solutions, LLC's, Energy Practice. NewGen offers a wide range of management, planning and economic services to clients in public power. His direct experience includes the management of high performance teams, strategic and business planning, performance management, economic analyses, asset valuation, revenue bond financing and cost of service and rate design analyses in the roles of project manager, lead analyst and expert witness. He has worked closely with public utility commissions, senior management teams, utility boards, city councils, attorneys, and end-users. He has designed and taught numerous classes on cost of service and rate design methodology, including a cost of service and rate design course for Electric Utility Consultants, Inc. He regularly speaks at conferences across the country.

## EDUCATION

- Master of Business Administration in Finance, University of Colorado
- Bachelor of Science in Geophysical Engineering, Colorado School of Mines

## KEY EXPERTISE

- Expert Witness and Litigation Support
- Cost of Service and Rate Design
- Asset Valuation
- Economic Analysis
- Strategic Planning
- Performance Management
- Revenue Bond Financing

## RELEVANT EXPERIENCE

### Cost of Service and Rate Design – Electric

Mr. Mancinelli has participated in numerous retail rate studies for electric utilities as summarized below:

- **Cost of Service and Rate Design Study – Tri-State Generation and Transmission Cooperative.** Mr. Mancinelli led a comprehensive independent review of Tri-State's cost of service and rate design practices. The study involved a detailed assessment of Tri-State's cost of service and the appropriate rate design in an effort to resolve rate disputes between its Members. NewGen was initially hired by a Member Rates Committee (Committee) appointed by the Tri-State Generation and Transmission Cooperative's Board of Directors (Board) to conduct a comprehensive cost of service study and support the Committee with rate design efforts. Tri-State is a Generation and Transmission Cooperative serving 44 members across Colorado, New Mexico, Nebraska and Wyoming. Services include development of historical and projected Test Year revenue requirements and the development of detailed and dynamic cost of service and rate design models. These models enable the Committee to evaluate alternative cost allocation methods and rate structures. In addition to conducting analyses, NewGen supported the Committee with advice, training, reports, presentations and other pertinent industry information. The Committee unanimously submitted to the Board a recommended cost of service methodology and rate design. Upon completion of the Committee work, Tri-State retained NewGen to work

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with the Board throughout the rate deliberation and approval process. NewGen supported the Board with training, advice and recommendations. Also, NewGen worked with Tri-State staff in the development and presentation of study results to a wide variety of stakeholder across the 44 member systems. Again, upon completion of a three month Board evaluation process, the Committee's recommended cost of service and rate design was unanimously approved by the Board.

- **Utility Services Study - U.S. Army; Huntsville, AL.** Mr. Mancinelli was project manager for numerous studies for the United States (U.S.) Army which evaluated and investigated electric consumption, contracts, potential upgrades, and distributed generation opportunities at active duty and reserve bases across the U.S. in an effort to reduce costs and support NetZero energy goals. NewGen supported the Army's goals including the development of a comprehensive electric utility contract and tariff database for the bases, evaluating nine reserve bases' energy consumption and cost reduction opportunities, and following up on prior studies to evaluate past upgrade benefits. Specific tasks included evaluating energy consumption profiles, billing accuracy, base operations, contract terms, rate options, asset / facilities upgrades (e.g. energy efficiency/demand response), distributed generation options, and tenant billing recovery. The result of the project provided recommendations tailored to each base to optimize rate options, existing/planned distributed renewable generation, and facility upgrades to reduce costs and support NetZero goals.
- **Unbundled Cost of Service and Rate Design – Lubbock Power and Light, Lubbock, Texas.** Since its inception, Lubbock Power and Light (LP&L) competed head to head with Xcel Energy for electric customers within the City's service territory. Electric rates were established on a purely competitive basis in order to attract and retain customers. However, in 2009, LP&L purchased the distribution system from Excel and become a monopoly electric service provider. Given this change in the business operations. LP&L retained NewGen to perform the utilities first ever cost of service and rate design study. Mr. Mancinelli led the effort which included staff training on cost of service concepts, development of sophisticated cost of service and rate design tools, education of Utilities Board and City Council through multiple workshops and support at public meetings.
- **Unbundled Cost of Service and Rate Design – Austin Energy; Austin, Texas.** Mr. Mancinelli managed a comprehensive cost of service and rate design study for Austin Energy which included the determination of system revenue requirements, an unbundled cost of service analysis, rate design, and support of an extensive public involvement process. The study addressed many challenges faced by AE such as pricing strategies to support system efficiency, deployment of new technologies and active support of environmental stewardship.  
  
Rate design took into consideration fixed cost recovery strategies in support of AE's aggressive energy efficiency and distributed solar goals. Additionally, rates were unbundled and various pass-through mechanisms were employed to manage the risk associated with volatile and unpredictable costs associated with ERCOT regulatory requirements. Cost of Service and rate design models were developed with to support the rate case filing requirements. Testimony supporting the study was prepared and presented to the Public Utility Commission of Texas.
- **Evaluate Cooperative Wholesale Power Rate and Structure – Delta Montrose Electric Association, Colorado.** Mr. Mancinelli provided a high level review and evaluation of a large wholesale power electric cooperative's rates and structural rate changes to its members. The Generation and Transmission electric cooperative provides power to 44 distribution members across several states including a wide variety of member loads (e.g. agricultural/irrigation driven member loads vs. high load factor large commercial members). The G&T coop implemented a new energy-only, seasonal TOU rate. The review included evaluating the impacts of the new wholesale seasonal and TOU pricing structure on DMEA's current system, potential impacts to higher load factor customers and the likely long-term impacts to the member and cooperative's system load profiles. Tasks included evaluating pros/cons and the longer term impacts of switching from a fixed and variable rate structure to an energy only rate, new pricing signals and potential for load factor degradation and identified the likely 'break-even' system load factor from the existing rate and the new rate.



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- **Cost of Service, Rate Making and Customer Rate Impacts – United Power Electric Cooperative; Brighton, Colorado.** In the role of Project Manager, Mr. Mancinelli led NewGen team members in updating United Power's existing cost of service analysis and modified the analysis as necessary to reflect the change in the wholesale rate structure. Tri-State proposed a dramatic shift in its wholesale pricing structure shifting from a demand and energy rate to an all energy rate structure. This pricing change resulted in a shifting of costs from low load factor to high load factor customers. The project team evaluated multiple cost allocation and pricing scenarios including the development of a five-year rate design phase in strategy.
- **Rate Advisory Services – Fort Collins Utilities; Fort Collins, Colorado.** Cost of service and rate design in support for the electric, water, wastewater utilities. Mr. Mancinelli assisted the electric utility in the development of a rate design philosophy which serves as a guide for policy makers in the rate setting process. Additionally, rates were redesigned and implemented for the residential and small commercial customer classes to improve conservation and efficiency signals. Also, Mr. Mancinelli assisted the electric utility in a preliminary evaluation of TOU and electric vehicle rates in anticipation of Fort Collins Utilities deployment of smart meters during the 2012 -2013 time period.
- **Unbundled Cost of Service Study – City Public Service (CPS) of San Antonio; San Antonio, Texas.** Worked closely with the CPS staff in developing one of the first comprehensive unbundling studies in the industry. The study has served as a model for future unbundling studies that are now common place today.
- **Unbundled Cost of Service and Rate Design – New Braunfels Utilities; New Braunfels, Texas.** Developed numerous cost of service and rate design scenarios that considered various power supply and commercial class options.
- **Competitive Rate Analysis, Cost of Service, and Rate Design – GEUS; Greenville, Texas.** Performed multiple cost of service and rate design studies supporting utilities financial requirements in light of extremely competitive rate environment in Texas, particularly with the neighboring investor-owned utility.
- **Unbundled Cost of Service and Rate Design – Brownsville Public Utilities Board (BPUB); Brownsville, Texas.** Assisted BPUB in developing unbundled rates in preparation for retail competition in Texas. The study included unbundled cost of service analysis, competitive rate analysis, and rate design. Numerous rate and cost of service analyses have been performed for this client.
- **Unbundled Cost of Service and Rate Design – Bryan Texas Utilities (BTU); Bryan, Texas.** Assisted BTU in developing unbundled rates in preparation for retail competition in Texas. The study included unbundled cost of service analysis and rate design. Numerous rate and cost of service analyses have been performed for this client.
- **Competitive Fuel Assessment – City of Garland Power and Light (GP&L), Garland, Texas.** GP&L's direct competitor is neighboring TXU. To understand the implications of a changing power market and fuel prices on the competitive relationships between each utilities retail rates, GP&L retained our firm to perform a competitive assessment. The competitive assessment evaluated the underlying cost structures of both utilities and the associated cost of service for certain rate classes.
- **Unbundled Cost of Service and Rate Design – Weatherford Municipal Utilities, Weatherford, Texas.** Performed a retail unbundling study that unbundled utility costs based on services currently provided to customers. Developed an integrated pro forma model of each of the three utility systems on a stand-alone basis that determined the City's revenue and capital requirements for each utility over a projected five-year period. Numerous rate and cost of service analyses have been performed for this client.
- **Rate Case Management and Expert Testimony – Plains Electric Generation and Transmission Cooperative, Inc.** Mr. Mancinelli supported Plains Generation and Transmission Cooperative (Plains) in numerous regulatory proceedings and a comprehensive rate case over the period of 1997 to 2000. At that time, Plains was in financial distress and was seeking rate relief from the New Mexico Public Utilities Commission (NMPUC). Plains primary

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asset included the Escalante Power Station, a 250 MW base load coal unit. He supported Plain's COS and rate recommendations, which were successfully adopted by the NMPUC. Eventually, in 2000, Plains merged with Tri-State Generation and Transmission Cooperative. In the interim, on behalf of Plains, Mr. Mancinelli served as the primary rates and regulatory analyst for the generation and transmission cooperative during the transition period. Mr. Mancinelli acted in this role in a significant capacity from 1998 through 2000.

- **Financial Restructuring and Related Services – Deseret Power Cooperative, Utah.** Over a several year period, Mr. Mancinelli assisted Deseret Power Cooperative (Deseret) on a variety of assignments associated with the restructuring of debt obligations associated with Deseret generation assets. Deseret's most significant assets include a 25 percent ownership share of the Hunter coal unit, full ownership of the Bonanza coal-fired generation station, a bituminous coal mine (Deserado Mine), and a coal transportation system. He supported Deseret with the development and evaluation of business plans that looked at alternative paths forward for the wholesale power supplier. Options evaluated ranged from selling all or part of the system to third parties, to restructuring Deseret debt obligations and continuing to operate in an autonomous fashion. Business plans were supported with a long-term financial forecast that projected the utilities fixed and variable cost obligations, cash flows available for credit obligations, and the impact on member rates. He interacted heavily with Deseret members and creditors. Upon completion of the evaluation process, Deseret successfully restructured its debt and continues to operate today in a highly efficient and effective manner.

Additional services provide to Deseret included COS and rate design associated with large industrial and mining load service by Deseret members. Rate design took into consideration the marginal cost of generation and creative rate design options were developed to retain large loads threatening to leave the system.

Other services included an appraisal of the Bonanza Generation Station and the Deserado Mine for property tax purposes. Appraisals adhered to the criteria set forth by the American Society of Appraisers of which a key indicator of value is a long-term discounted cash flow analysis of power station and mine operations.

- **Utility Acquisition – Tri-State Generation and Transmission; Westminster, Colorado.** Performed an economic evaluation of an acquisition of customers to assess asset value in support of a competitive bid process.

## Expert Witness and Litigation Support

Mr. Mancinelli has offered expert testimony regarding cost of service rate design and ratemaking issues before state and local regulatory bodies and courts. He has national experience providing litigation support regarding ratemaking matters at wholesale and retail levels in Alaska, Colorado, Guam, Michigan, New Mexico, Nevada, Texas, and Utah.

- **Expert Testimony – Northern Indiana Public Service Company, Cause No. 44688.** Expert testimony discussing the benefits of adding additional interruptible capacity on the system and the proper allocation of generation costs given the systems unique characteristics.
- **Expert Testimony – Bryan Texas Utilities, Docket No. 44467.** Expert testimony in support of BTU's interim transmission cost of service filing before the Public Utility Commission of Texas. Testimony determined transmission function revenue requirement in consideration of significant recent capital improvements completed by BTU.
- **Expert Testimony – Lower Colorado River Authority, Cause No. 121-001-B.** Mr. Mancinelli testified in a wholesale rate dispute between the City of Kerrville, acting by and through Kerrville Public Utility Board and the Lower Colorado River Authority. After the Municipal utility decided not to renew and extend their long-term power contracts with LCRA, and LCRA changed some key rate policies that impacted the utility, the parties' disagreements evolved into a contract rate dispute in District Court of Kerr County. Key issues of the dispute included migrating from a demand/energy wholesale rate structure to an all energy wholesale rate structure, non-uniform application of rates between the various LCRA customers and retention of excess earnings.
- **Expert Testimony – GEUS; Texas Public Utilities Commission; Docket No. 42581.** Testified on transmission system revenue requirement, cost of service, and return on rate base issues. Successfully achieved a 17 percent

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increase in clients transmission revenue requirement reflecting a 7 percent increase in the wholesale transmission rate.

- **Expert Testimony – Bryan Texas Utilities, Docket No. 41920.** Expert testimony in support of BTU's interim transmission cost of service filing before the Public Utility Commission of Texas. Testimony determined transmission function revenue requirement in consideration of significant recent capital improvements completed by BTU.
- **Expert Testimony – Lower Colorado River Authority, Cause No. D-1GN-12-002156.** Mr. Mancinelli prepared expert witness report quantifying damages incurred by customers associated with LCRA wholesale rate practices. Three electric cooperatives, Central Texas Electric Cooperative, Inc., San Bernard Electric Cooperative, Inc., and Fayette Electric Cooperative, Inc. (Cooperatives), were long-standing wholesale power customers of the Lower Colorado River Authority (LCRA). After the Cooperatives decided not to renew and extend their long-term power contracts with LCRA, and LCRA changed some key rate policies that impacted the Cooperatives, the parties' disagreements evolved into a contract rate dispute in Travis County, Texas District Court. Key issues of the dispute included migrating from a demand/energy wholesale rate structure to an all energy wholesale rate structure, non-uniform application of rates between the various LCRA customers and retention of excess earnings.
- **Expert Testimony – Austin Energy; Docket No. 40627.** Austin Energy serves a large number of customers outside the City limits, and therefore, is subject to the regulatory authority of the Public Utilities Commission of Texas (PUCT) if so petitioned by outside the city customers. In the fall of 2012, in conjunction with the City Council approval of retail rates, outside the city customers petitioned the PUCT to review recently adopted rates. In support of AE's rate petition, Mr. Mancinelli provided comprehensive expert testimony related to Austin Energy system revenue requirements, cost of service and rate design. The case was successfully settled in AE's favor in the spring of 2013.
- **Expert Testimony – Guam Power Authority; Docket No. 11-09.** Provided regulatory advice in support of a comprehensive rate case filed before the Guam Public Utilities Commission. Services provided included rate case strategy, coordination and critique of testimony developed by GPA staff and other expert witnesses and development of testimony in support of the GPA revenue requirement.
- **Expert Testimony – Rocky Mountain Power; Docket Nos. 08-035-38 and 09-035-23.** Rate case support related to Docket 08-035-38 and filed testimony in Docket 09-035-23. Testified on behalf of the Utah Division of Public Utilities, the regulatory arm of the Utah Public Utilities Commission with respect to Rocky Mountain Power's cost of service analysis. Review included cost classification, allocation methodology, model design, rate design, and associated customer impacts.
- **Expert Testimony – GEUS; Texas Public Utilities Commission; Docket No. 37180.** Testified on revenue requirement, cost of service, and return on rate base issues. Successfully achieved a 39 percent increase in clients transmission cost of service.
- **Expert Testimony – Chugach Electric and Homer Electric Association; Regulatory Commission of Alaska; Docket No. U-06-134.** Testified on revenue requirement, cost of service, class, and TIER issues.
- **Litigation Support – Brownsville Public Utilities Board; Docket No. 32905; Filing of Transmission Cost of Service before the Texas Public Utilities Commission.** Developed testimony on behalf of the Brownsville Public Utilities Board in support of transmission costs to be included in the Electric Reliability Council of Texas transmission postage stamp rate calculation.
- **Expert Testimony – Application of Sierra Pacific Power Company with respect to retail rates; Docket No. 05-10003.** Provided testimony on behalf of the Nevada Resort Association in support of reductions to the Sierra Pacific revenue requirement and modifications to the Sierra Pacific marginal cost of service study.

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- **Litigation Support – Lamar Light and Power versus Colorado Aquatone.** Provided testimony on behalf of Lamar Light and Power in dispute over the economic benefits and impact on rates of mothballing a gas-steam generation station.
- **Litigation Support – Xcel Energy; Docket Number 02S – 315 EG; The Investigation and Suspension of Tariff Sheets Filed by Public Service Company of Colorado Advice Letter No. 1373 – Electric, Advice Letter No. 593 – Gas, and Advice Letter No. 80 – Steam.** Intervened on behalf of the City and County of Denver.
- **Litigation Support – AEP Texas Central Company; application of AEP Texas Central Company for authority to change rates; PUC Docket No. 28840.** Evaluated impact of proposed rates and cost of service on the retail ratepayers of numerous Texas cities.
- **Litigation Support – GEUS; Greenville, Texas; Case Number 25591.** Prepared analysis in support of settlement negotiations with Texas Public Utilities Commission.
- **Litigation Support – Brownsville Public Utilities Board; Texas.** Supported legal team intervention in numerous rate proceedings at the Public Utility Commission of Texas related to Texas deregulation Senate Bill #7.
- **Expert Testimony – Brownsville Public Utilities Board; Texas; Texas Water Commission; Docket No. 9013-M.** Water System Revenue Requirement and Allocated Cost of Service for a Special Contract Customer.
- **Expert Testimony – GEUS; Greenville, Texas; Texas Public Utility Commission.** Compliance with Substantive Rule 23.67: Unbundled Transmission Cost of Service.
- **Expert Testimony and Litigation Support – The City and County of Denver; United States District Court for the District of Colorado; Civil Action No. 96-D-2968.** Radium Storage Fees.
- **Expert Testimony – Plains Electric Generation and Transmission Cooperative, Inc.; New Mexico Public Utilities Commission; Docket No. 2797.** Electric System Cost of Service and Rate Study.
- **Expert Testimony – Traverse City Light and Power and Michigan Public Service Commission; Case Number U-13716.** Prepared expert testimony on evaluating cost basis for proposed large resort service tax.
- **Expert Testimony – Traverse City Light and Power and City of Traverse; Case Number U-12844 and U-13071.** Testified against damages associated with loss of large retail load to a competing utility.

## Workshops and Presentations

Mr. Mancinelli has given numerous presentations and participated in training and workshops in several states. These activities have focused on cost of service, ratemaking, and competitive issues.

- **American Public Power Association**
  - Costs and Benefits of Generation Resources
  - Innovative Rates and Rate Riders for Key Accounts
  - Including Risk Management in the Key Account Function
  - Advanced Rate Making Concepts for Publicly Owned Electric Systems
  - Retail Rate Design for Publicly Owned Electric Systems
- **Electric Utility Consultants, Inc.**
  - Witness Preparation. A two day training program pertaining to preparing and serving as an expert during the rate case process and learning how to be an effective witness during a rate case hearing
  - Introduction to Cost of Service Concepts and Techniques for Electric Utilities.

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- Introduction to Rate Design for Electric Utilities. A two day course taught semi-annually
- **Texas Public Power Association**
  - Establishing Effective Financial Policies for Your Utility
  - Developing Rate Design Strategies and Financial Policies for Your Utility
  - Contracting with Retail Customers
- **New Mexico Rural Electric Association** – Unbundling for Competition
- **Utah Association of Municipal Power** – Electric Rate Unbundling
- **Utah Rural Electric Association** – Electric Rate Unbundling
- **New Hampshire Electric Cooperative** – Two day strategy and training program pertaining to rate design and cost of service



**Grant Rabon**  
Executive Consultant  
grabon@newgenstrategies.net

Mr. Rabon has over ten years of experience managing projects for electric, water, wastewater, and solid waste utility engagements. His educational background facilitates a unique understanding of the financial implications for technical projects. Further, he is one of less than 30 individuals in the nation with an ASA designation in Public Utilities from the American Society of Appraisers.

## EDUCATION

- Master of Business Administration, The University of Texas at Austin, McCombs School of Business
- Bachelor of Science in Chemical Engineering, Texas A&M University, College Station

## PROFESSIONAL CERTIFICATIONS

- Accredited Senior Appraiser (ASA) designation in Public Utilities from American Society of Appraisers

## EXPERIENCE

*Some of the following projects were completed by Mr. Rabon while employed by SAIC Energy, Environmental & Infrastructure, LLC (formerly R.W. Beck).*

Mr. Rabon has over ten years of experience performing financial evaluations for electric, water, wastewater, and solid waste utilities to safeguard their financial integrity either through the conduct of financial feasibility studies, valuations/appraisals or comprehensive cost of service analyses. Rates designed as a result of these engagements equitably recover the full cost of service, including special consideration for affordability and best practice rate structures.

Key projects include:

- **Austin Energy Cost of Service and Testimony** – Conducted a comprehensive, unbundled cost of service analysis for the electric utility and designed rates to achieve the City of Austin's goals. Filed direct testimony on behalf of the City of Austin d/b/a Austin Energy at the Public Utility Commission of Texas in defense of the electric rates adopted by Austin City Council. (PUC Docket No. 40627)
- **Electric Wholesale Rate Damages** – Calculated damages owed to three electric cooperatives and one municipally owned utility as part of a wholesale rate dispute with the Lower Colorado River Authority in Travis and Kerr County, Texas District Courts. This included recreating billing determinants and the development of a market access rate. (Cause No. D-1-GN-12-002156 and Cause No. 12-1001-B)
- **Utility Acquisition and Regulated Rate Filing** – Conducted a fair market value appraisal of an investor-owned utility, including 13 water systems and 27 wastewater systems, in support of an acquisition of some of these systems by Greater Ouachita Water Company (GOWC). Subsequently conducted a comprehensive cost of service analysis for the existing water and wastewater utilities of GOWC and developed rates to recover all costs, including the acquisition and necessary capital improvements. Filed required schedules with the Louisiana Public Service Commission in support of the acquisition and rate request. (LPSC Docket No. U-32803)
- **Lower Colorado River Authority Wholesale Water Benchmarking and Rate Analysis** – Performed a benchmarking analysis to identify best practices among wholesale water entities around the nation, with an emphasis on innovative rate structures and water conservation efforts. A long-term rate analysis was conducted to incorporate projected capital projects to expand the water supply over a 90 year horizon under various rate structures.

## Grant Rabon

### Executive Consultant

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- **Greenville Electric Utility System (GEUS) Electric Transmission Filing** – Quality assurance review of a comprehensive cost of service analysis for the transmission function and regulated rate filing with the Public Utility Commission of Texas.
- **San Antonio Water System (SAWS) Project Delivery Financial Modeling** – Developed a financial feasibility model to evaluate the relative capital and operational costs under various project delivery options for a 20 million-gallon-per-day brackish groundwater desalination facility, including traditional DBB, DB, DBO and a customized DBOOT.
- **Utility Valuation** – Various projects to determine the fair market value of utilities for acquisitions as well as analyses to evaluate municipalization or privatization of utilities. Also conducted water service area valuations to determine compensation for decertification of areas covered by certificates of convenience and necessity. These projects include valuations of following utilities:
  - Aqua Texas, Inc. (a portion of the system)
  - Aqua Indiana, Inc. (a portion of the system)
  - Bi-County Water Supply Corporation
  - Brownsville Navigation District
  - El Jardin Water Supply Corporation
  - City of El Paso's Clint and McCombs Municipal Landfills
  - Esperanza Water Service Company
  - Greater Ouachita Water Company
  - Jarrell-Schwertner Water Supply Corporation
  - Johnson County Special Utility District
  - Liberty City Water Supply Corporation
  - Pennichuck Corporation's water utility in the City of Nashua
  - Rice Water Supply & Sewer Supply Corporation
  - City of Superior's Moccasin Mike Landfill
- **Other Cost of Service and Rate Design Studies** – Conducted one or more comprehensive cost of service and rate design studies for the following entities:
  - City of Athens, Texas
  - City of Bryan, Texas
  - City of Del Rio, Texas
  - City of Greenville, Texas
  - City of Longview, Texas
  - City of New Braunfels, Texas
  - City of Nogales, Arizona
  - City of Olathe, Kansas
  - City of Peoria, Arizona
  - City of Pflugerville, Texas
  - City of Sioux Falls, South Dakota
  - City of Stillwater, Oklahoma
  - City of Sugar Land, Texas
  - City of Tempe, Arizona
  - City of Temple, Texas
  - City of Tucson, Arizona
  - City of Vernon, California
  - City of Weatherford, Texas
  - Greater Ouachita Water Company, Louisiana
  - Manville Water Supply Corporation, Texas
  - North Slope Borough, Alaska
  - Pima County, Arizona
  - Rockett Special Utility District, Texas
  - Saint Tammany Parish, Louisiana
  - Snohomish County, Washington

**Grant Rabon**  
Executive Consultant

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- Walker County Special Utility District, Texas

## **PRESENTATIONS**

- "Keeping Your System Financially Fit; Learn How to Set Good Water Rates", Texas Rural Water Association's 43rd Annual Convention, March 2012
- "Regionalization Efforts: A Louisiana Case Study", AWWA WEF 2013 Utility Management Conference, March 2013
- "CCN Valuations: Financial Considerations Related to Decertification and Expedited Release", Texas Rural Water Association's Fall Management Conferences, October and November 2014
- "Water Rates 101", Texas Rural Water Association's Office Professionals Conference, June 2015





**Jack E. Stowe, Jr.**  
Director, Environmental Practice  
[jstowe@newgenstrategies.net](mailto:jstowe@newgenstrategies.net)

Mr. Stowe's Public Sector consulting career began in 1975. His career includes nine years in a "big-eight" public accounting and consulting firm where he held the title of Manager at the time of his resignation. After serving one and one-half years as Chief Financial Officer and Treasurer of an International Real Estate firm, Mr. Stowe founded Aries Resource Management as a consulting group dedicated to serving the Public Sector. In 1986, Aries Resource Management entered into a partnership agreement with Reed Municipal Services, Inc., to form Reed-Stowe & Co. Effective October 2000 the company was renamed Reed, Stowe & Yanke, LLC and in March 2003 was acquired by R. W. Beck, Inc. During his tenure with R.W. Beck, Mr. Stowe served as the Local Practice Leader for the Firm's Utility Services Practice - Gulf Coast Region. Upon expiration of his employment contract with R.W. Beck in March 2008, Mr. Stowe founded J. Stowe & Co. In September 2012, Mr. Stowe became President of the Environmental Practice for NewGen Strategies & Solutions. Mr. Stowe assumed the position of Director, in January of 2015.

## EDUCATION

- Bachelor of Arts in Accounting, North Texas State University

## PROFESSIONAL AFFILIATIONS

- Texas Water Conservation Association (TWCA)
- American Water Works Association (AWWA)

## EXPERIENCE

Mr. Stowe's experience is highlighted by the major roles he has fulfilled in assisting Public Sector entities in achieving major cost savings through contract negotiations for services and implementation of organization and operational enhancements. A brief example of engagements conducted by Mr. Stowe includes:

- Raw water service contract negotiations between the City of Arlington and the Tarrant County Water Improvement District No. 1 (now Tarrant Regional Water District).
- Wastewater service contract negotiations between the Customer Cities and the City of Fort Worth. Representing the twenty-one Customer Cities of Fort Worth a detailed wastewater cost of service study was conducted to provide the foundation for contract renewal negotiations.
- Assisted TWCA-USA, Inc. in the electric load aggregation of 15 TWCA members. This effort has resulted in the release of a Request For Bid on approximately 800,000,000 kWh brought to market.

Mr. Stowe has also participated in negotiations of operation, maintenance and management privatization/outsourcing contracts for the following:

- Red River Redevelopment Authority – water, wastewater, gas, electric, steam and industrial waste treatment
- Southwest Division of United States Navy-privatization of electric, gas, water and wastewater operations

In addition, Mr. Stowe authored the "Market Strategies for Improved Service by Water Utilities Report" on behalf of the Texas Water Development Board. This study analyzes and presents the status of privatization of water utility operations within the State of Texas contrasted against national activity. Also for the Texas Water Development Board, Mr. Stowe authored the study titled "Socioeconomic Impact of Interbasin Transfers in Texas"

This study was undertaken to determine the impact of current legislation on the consideration of interbasin transfers as potential water management strategies by the State's regional water planning groups.

## Jack E. Stowe, Jr.

Director, Environmental Practice

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Mr. Stowe has also been actively involved in water utility system valuation, and has performed such studies for the following entities:

- RCH Water Supply Corporation
- Kelly Air Force Base
- Walker County Water Supply Corporation
- Johnson County Water Supply Corporation
- High Point Water Supply Corporation
- Liberty City Water Supply Corporation
- Royse City, Texas / BHP Water Supply Corporation
- Groundwater Valuation – Oakland County, Michigan, Wood Wind Water System, LLC
- Groundwater Valuation – Oakland County, Michigan, Oakland Explorations Water System, LLC

The results of the above valuations served as the foundation for the sale/transfer of ownership for the utilities identified or the donation of the assets in accordance with Section 170 of the Internal Revenue Service Code of 1986.

The following is sample list of clients for which Mr. Stowe has performed water and/or wastewater cost of service, customer class cost allocation, and/or rate design study, including wholesale, clients:

- |   |                                    |
|---|------------------------------------|
| ■ Arlington, Texas                                | ■ Grapevine, Texas                 |
| ■ Argyle Water Supply Corporation                 | ■ Hobbs, New Mexico                |
| ■ Barton Creek Lakeside                           | ■ Kaufman, Texas                   |
| ■ Bellaire, Texas                                 | ■ Kempner Water Supply Corporation |
| ■ Borger, Texas                                   | ■ Kilgore, Texas                   |
| ■ Cameron County Fresh Water Supply District No.1 | ■ Knollwood, Texas                 |
| ■ Celina, Texas                                   | ■ Lewisville, Texas                |
| ■ Copperas Cove, Texas                            | ■ Lubbock, Texas                   |
| ■ Corsicana, Texas                                | ■ Mesquite, Texas                  |
| ■ Dallas Water Utilities                          | ■ Midlothian, Texas                |
| ■ Denton, Texas                                   | ■ Montgomery County MUD            |
| ■ Devers Canal System                             | ■ North Myrtle Beach, SC           |
| ■ El Oso Water Supply Corp.                       | ■ North Richland Hills, Texas      |
| ■ Farmers Branch, Texas                           | ■ Paris, Texas                     |
| ■ Ft. Worth, Texas                                | ■ Richmond, Virginia               |
| ■ Georgetown, Texas                               | ■ Rockett Special Utility District |
| ■ Gilmer, Texas                                   | ■ Rowlett, Texas                   |
| ■ Glenn Heights, Texas                            | ■ Sachse, Texas                    |
|   | ■ Sanger, Texas                    |

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Director, Environmental Practice

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- Tarrant Regional Water District
- United Irrigation District
- Weatherford, Texas
- Westminster, Colorado
- Wylie, Texas

Other services provided by Mr. Stowe are further detailed below:

- Assisted Dallas Water Utilities and Tarrant Regional Water District in examining the financing alternatives, obtaining state funding, and establishing the cost allocation methodology associated with the \$1.9 billion Lake Palestine Pipeline Project. Mr. Stowe also performed a comprehensive examination of the impact of energy costs on the proposed Project alternatives, including developing a forecasting model of electricity costs through 2060.
- Developed an impact fee econometric model used by the Cities of North Richland Hills, Grapevine, Lewisville and Wylie to calculate the maximum allowable fee under S.B. 336. Also responsible for the development and implementation of administrative procedures and systems modifications enabling these Cities to comply with the monitoring requirements of S.B. 336.
- Performed an economic feasibility study for the City of Arlington for alternative wastewater diversion. The study provided a twenty year projected population growth within defined service areas, discharge characteristics, and related capital improvement requirements for each alternative.
- Participated in the acquisition of the Street Lighting System from Texas Electric Service Company by the City of Arlington which was consummated after a six-month study and purchase negotiation. Purchase pay back was achieved within three years with annual operating cost reduction currently accruing at the annual rate of approximately \$700,000 to the City.
- Assisted Dallas Water Utilities, North Texas Municipal Water District, Sabine River Authority of Texas, and Tarrant Regional Water District in assessing the feasibility and economic impact of the Toledo Bend Water Supply Project, which proposes to supply at least 600,000 acre-feet of raw water to the DFW Metroplex.

Mr. Stowe has had extensive consulting experience within the utility industry. His experience encompasses not only utility ratemaking under federal, state and municipal jurisdictions, but also includes significant experience in the following areas:

- Organization and operations for investor owned utilities and municipal utilities;
- Financial projections and operating system requirements;
- Contract Negotiations;
- Breach of Franchise Agreements; and
- Economic Feasibility Studies.

Specifically, Mr. Stowe has conducted and/or supervised analyses of rate base, operating income, rate of return, revenue requirements, fully allocated cost of service and rate design. The results of these studies were generally summarized into expert testimony and presented in rate case proceedings at either the state and/or local jurisdictions. The various jurisdictions Mr. Stowe has performed consulting services in are as follows:

- Arizona Corporation Commission
- Federal Energy Regulatory Commission
- Illinois Commerce Commission
- Kentucky Public Service Commission
- Mississippi Public Service Commission
- New Mexico Public Service Commission
- Oklahoma Corporation Commission
- Public Utility Commission of Texas
- Railroad Commission of Texas
- Texas Commission on Environmental Quality

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- Utah Public Service Commission
- Wyoming Public Service Commission

Samples of the specific utility companies analyzed by Mr. Stowe are presented below. Many of these Mr. Stowe has investigated on numerous engagements during his career:

- ATC Satelco
- AT&T
- Arkansas-Oklahoma Gas Corporation
- Arizona Public Service
- Central Power & Light (now AEP)
- Canadian River Municipal Water Authority
- Dallas Water Utilities
- Denton County Electric Cooperative (now CoServ)
- Detroit Edison
- Gulf States Utilities (now Entergy)
- Houston Lighting & Power (now Reliant)
- Indianapolis Power & Light
- Kentucky Power & Light
- Lake Dallas Telephone Company
- Lower Colorado River Authority
- Lone Star Gas Company (now ATMOS)
- Magnolia Gas
- Metro-Link Telecom, Inc.
- Mississippi Power & Light
- Mojave Electric Cooperative
- Mountain States Bell
- Southern Union Gas Company
- Southwest Electric Service Company (now TXU)
- Southwestern Bell Telephone
- Southwestern Public Service Company
- San Miguel Electric Cooperative
- Texas Electric Service Company (now TXU)
- Texas-New Mexico Power Company
- Texas Power & Light (now TXU)
- Tucson Gas & Electric
- Utah Power & Light
- United Telecommunications
- West Texas Utilities (now AEP)

## Publications and Presentations

"Street Lighting Cost Reduction, a Game Plan for the 80's", Texas Institute of Traffic Engineers

"The Impact of Senate Bill No. 336"

- Research Group of the Texas Association of City Managers
- Central Region of the Texas Association of City Managers
- Gulf Coast Region of the Texas Government Financial Officers Association

Government Finance Officers Association of Texas Newsletter

- "A New Challenge for Municipal Gas Regulation"
- "The Case of the Vanishing Gross Receipts Tax"
- "Impact of Senate Bill 336" (Assessment of Developer Impact Fees)
- "Street Lighting Cost Reduction Through Municipal Ownership"

"Rate Impact of Water Conservation Pricing", Texas Water Conservation Association, 1993

"Alternative Funding for Capital Improvements", Water Environmental Association of Texas, 1994

"Construction Management and Financing Alternatives", Water Environmental Association of Texas, 1994

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"Management Audits", Texas Water Conservation Association - Technical Seminar, 1994

"Ins and Outs of Rate Making", American Association of Water Board Directors, 1995

"Solid Waste Full Cost Accounting", Texas Natural Resource Conservation Commission, 1995

"SBI Deregulation 101",

- Texas Water Conservation Association, 1998
- Texas Rural Water Association, 1999

"The Benefits of Electric Aggregation", Texas Water Conservation Association, 1999

"Water Retail Wholesale Ratemaking", Texas Water Conservation Association – Technical Seminar, 2000

"Electric Deregulation in Texas", Texas Chapter of the Public Works Association, 2000

"Innovative Financing for Water and Wastewater Utilities", Texas Water Law Seminar, February 2002

"Encroachment Issues: Your Service Area is Worth How Much?" Texas Rural Water Association Annual Conference, March 2002

Allocating the Costs of Population Growth in Wholesale Water Contracts, Texas Rural Water Association and Texas Water Conservation Association Water Law Seminar, January 2007



**Nancy Heller Hughes**  
Director  
nhughes@newgenstrategies.net

Ms. Hughes has worked in the public utility industry since 1977 specializing in utility rates and regulation, depreciation, and valuation. She has testified as an expert witness on these issues before federal and state regulatory commissions, city councils and courts of law.

Ms. Hughes is an Accredited Senior Appraiser of utility property and has performed appraisal studies to determine the value of a wide range of utility property including electric, natural gas, water, wastewater, telecommunications and solid waste property. These studies have been performed in connection with the sale and acquisition of property, eminent domain cases, property tax issues, fixed asset inventory development and utility rate cases.

In addition, Ms. Hughes is a recognized expert on depreciation issues and has performed and critically evaluated depreciation studies for utilities across the U.S. She has also evaluated the appropriateness of decommissioning cost estimates and funding methodologies for nuclear and non-nuclear generating units. Ms. Hughes is a Certified Depreciation Professional (CDP) designated by the Society of Depreciation Professionals.

Ms. Hughes worked for R. W. Beck, Inc. from 1982 through 2012 and was an owner of the firm when it was acquired by SAIC in 2009. In 2012, Ms. Hughes joined NewGen Strategies and Solutions, LLC as a founding member.

## Education

- B.A. in Business and Statistics, University of Chicago
- M.B.A. in Finance and Accounting, University of Chicago

## Registration/Certifications

- Accredited Senior Appraiser (ASA), Public Utility Discipline, American Society of Appraisers
- Certified Depreciation Professional (CDP), Society of Depreciation Professionals

## Experience

### Appraisal Studies

- Appraisal of Electric Distribution System Facilities – South San Joaquin Irrigation District, California
- Appraisal of Water System – City of Claremont, California
- Appraisal of Transmission and Distribution System at Wright-Patterson Air Force Base – Dayton Power & Light
- Appraisal of Linden Wind Energy Project – Southern California Public Power Authority
- Appraisal of Tieton Hydroelectric Project – Southern California Public Power Authority
- Appraisal of Southeastern Louisiana Water & Sewer Co. – St. Tammany Parish, Louisiana
- Appraisal Study of Kaua'i Electric – County of Kaua'i, Hawai'i
- Appraisal of Douglas-Hayfork 60-kV Electric Transmission Line – Trinity Public Utilities District, California

## Nancy Heller Hughes

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- Appraisal of Electric Distribution Facilities – Lafayette Utilities System
- Appraisal of Trans-Alaska Pipeline System – North Slope Borough, Alaska
- Appraisal of Electric Generating Plants – Duquesne Light Company, Pittsburgh, Pennsylvania
- Appraisal of Domestic Water, Irrigation and Wastewater Systems, City of Bend, Oregon
- Appraisal of Electric Distribution System – Kanab City, Utah
- Valuation of Lake Tapps Municipal Water Rights – Cascade Water Alliance, Washington
- Appraisal of Electric Distribution Facilities – City of Lakewood, Washington
- Appraisal of Martins Creek and Sunbury Power Blocks – Access Leasing Corporation and Cypress Leasing Corporation
- Appraisal of Electric Distribution Property – City of Hermiston, Oregon
- Appraisal of Gas and Electric Utility Assets – Potomac Electric Power Company, Washington, D.C.
- Appraisal of Electric Transmission and Distribution Property – Clatskanie People's Utility District, Eugene, Oregon
- Appraisal of Electric Distribution Plant – City of Azusa, California
- Appraisal of Blackstone Station Steam Plant – Cambridge Electric Light Company, Cambridge, Massachusetts
- Appraisal of Electric Distribution Property – Eugene Water and Electric Board and Springfield Utility Board, Oregon
- Appraisal of Electric Distribution Property – Emerald People's Utility District, Eugene, Oregon
- Appraisal of Electric Distribution Property – Truckee-Donner Public Utility District, California
- Appraisals of Natural Gas and Electric Utility Property – City of Meriden, Connecticut
- Appraisal of Solid Waste Landfill – Arkansas State Highway Department
- Appraisal Review Reports of Three Electric Generation Stations – Exelon Corporation, Chicago, Illinois

### **Depreciation Studies**

- Depreciation Rate Study – CPS Energy, San Antonio, Texas
- Expert Testimony, Depreciation – Confederated Salish and Kootenai Tribes, arbitration case
- Expert Testimony, Non-nuclear Power Plant Dismantlement Costs – City of Austin, Texas
- Depreciation Rate Study – Kaua'i Island Utility Cooperative
- Depreciation Rate Study – Golden Valley Electric Association, Alaska
- Depreciation Rate Study – Tri-State Generation and Transmission Association, Inc., Westminster, Colorado
- Depreciation Rate Study – Homer Electric Association, Alaska
- Depreciation Rate Study – Department of Water, County of Kaua'i

## Nancy Heller Hughes

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- Expert Testimony, Depreciation – Lloyd, Gosselink, Blevins, Rochelle, Baldwin & Townsend, P.C. representing Texas Cities
- Depreciation Rate Study – Garland Power & Light, Garland, Texas
- Expert Testimony, Depreciation – Kaye Scholer, L.L.P., representing Connecticut Department of Public Utility Control
- Depreciation Rate Study – Freeport Electric, Freeport, New York
- Depreciation Rate Study – Salem Electric, Salem, Oregon
- Expert Testimony, Depreciation – Alaska Electric Generation and Transmission Cooperative, Inc.
- Expert Testimony, Depreciation and Fossil Dismantlement Study – Florida Municipal Power Agency
- Depreciation Rate Study, City Electric System – Key West, Florida
- Expert Testimony, Depreciation and Decommissioning – City Council of New Orleans, Louisiana
- Expert Testimony, Depreciation – North Carolina Municipal Power Agency No. 1 and Piedmont Municipal Power Agency





**Maxwell Bernt**  
Senior Consultant  
mbernt@newgenstrategies.net

Mr. Bernt joined NewGen Strategies & Solutions, LLC in January 2013 and holds a BA with Distinction from the University of Colorado - Boulder in Economics. Mr. Bernt has experience in cost of service (COS), rate design, economic impact analysis, pro forma financial analysis, depreciation analysis, database creation, large dataset management and analysis (e.g., Advanced Metering Data) and is extensively involved with the development and use of advanced economic analysis technologies and applications. Prior to joining NewGen, Mr. Bernt was as a financial and economic analyst for SAIC (formerly R.W. Beck) and served in the United States Air Force as an Airborne Linguist and Intelligence Analyst.

## EDUCATION

- Bachelor of Arts with Distinction, Economics, University of Colorado

## RELEVANT EXPERIENCE:

During his career, Mr. Bernt has worked with many municipal utilities, co-ops, private entities, and the federal government to providing economic, financial and management consulting and litigation support. A sample of Mr. Bernt's work experience is included below:

- **Cost of Service and Rate Design Utilizing AMI – United Power, CO:** Project manager for Electric COS and Rate Design study for a distribution coop. Study utilized system advanced metering (AMI) data to determine class cost of service allocations and appropriate rates to collect revenue requirement. Study focused on impacts to changes on system including growing distributed generation on system and changing wholesale power structure. Study included development of new Residential demand rate and Transmission Service rate.
- **Cost of Service and Rate Design for Wholesale Power and Transmission Provider – Tri-State G&T, CO:** Project Senior Consultant for Electric COS and Rate Design Study for wholesale power provider with 44 cooperative members across four states. Designed time sensitive rates for power and transmission as well as standby rates and renewable energy generation credits. Developed rate design model that utilizes member half-hour interval data to monitor and update rates and resulting member impacts.
- **Financial Modeling – CPS Energy:** Developed financial planning model with 25 year outlook. The model is designed to perform real-time scenario analysis solving and recall and will be integrated with budgeting, cost of service, rate design and generation planning models. Model includes visual dashboards and other graphical user interfaces to control real-time scenarios and advanced rate, debt and capital planning options while.
- **Cost of Service and Rate Design utilizing AMI Data – Bryan Texas Utilities:** Developed 10-year financial model which allows for various scenarios and reports to be created, recalled, analyzed and presented from graphical user interface or classic Microsoft Excel interface. Created Cost of Service and Rate Design model that utilizes system AMI data to determine class cost of service and appropriate rates to collect revenue requirement. Model allowed for consolidation of customer classes, shifting of customers between classes based on specified distinction (size, location, etc.), economic impact from rate changes at individual customer level, and the development of rates for new classes (e.g., Transmission Service) and advanced time-of-use based rates.
- **Integrated Resource Planning Review, Department of Energy:** Staff consultant for review of IRP requirements imposed by the Western Area Power Administration, a Department of Energy entity, on recipients of federal government hydro power. Researched and analyzed IRP cost and benefits specifically as it pertained to promoting energy efficiency. Coauthored project report and recommendations to the Department of Energy.
- **Depreciation Study – Golden Valley Electric Association, AK:** Economic analyst for depreciation study. Researched regional industry standards and performed analysis to determine remaining life, life span, net salvage and depreciation rates.



**Jessica B. Terry**  
Senior Consultant  
jterry@newgenstrategies.net

Ms. Jessica Terry joined NewGen Strategies and Solutions in September 2014. Since attaining a Bachelor in Business Administration in Finance at The University of Texas, Ms. Terry has worked in the utility industry for five years. Through her career, Ms. Terry has focused on financial and operational aspects of the water, wastewater, electric, solid waste, and recycling industries. Her project experience includes cost of service, rate design, operations reviews, operational modeling, feasibility studies, financial planning, procurement, and benchmarking.

## EDUCATION

- University of Texas, Austin, Bachelor of Business Administration, Finance

## EXPERIENCE

### Electric Cost of Service and Rate Design

Tri-State Generation & Transmission Association, Inc.

To date, Ms. Terry has completed a comprehensive and detailed cost of service study based on a historical test year for Tri-State Generation & Transmission Association, Inc. (Tri-State), in compliance with the New Mexico Public Utility Commission (NM PUC) requirements. NewGen was hired to perform an independent analysis of Tri-State's costs that will facilitate resolution to cost of service and rate design disputes among the 44 wholesale members. This cost of service study has been allocated based on four different methods; including, the Cost Accounting, Average Excess Demand, Peaker Equivalent and BIP methods. Four cost of service methods have been applied to the Tri-State revenue requirement in order to evaluate the most appropriate cost of service methodology for the Tri-State system. This cost of service and rate design study is part of member chaired rate committee evaluation to determine the most appropriate cost of service methodology and rate structure for the Tri-State system and its' members. This project includes two cost of service studies (based on historical and budgeted years), a New Mexico PUC filing, wholesale rate benchmarking and wholesale rate design. In addition to these deliverables, Ms. Terry has developed material to facilitate and train the rate committee on cost of service methodology and rate design.

### Electric Rate Intervention Analytics

U.S. Army

Ms. Terry evaluated testimony and exhibits to support expert testimony filed on behalf of the U.S. Army in its' intervention to the proposed electric and natural gas rate increase filed by BG&E Maryland (BG&E) before the Maryland Public Service Commission. Ms. Terry reviewed the cost of service allocation methodology performed by BG&E, and developed exhibits that supported expert witness testimony.

### Water and Wastewater Cost of Service and Rate Design

Ms. Terry has performed financial evaluations for water and wastewater utilities to safeguard their financial integrity either through the conduct of financial feasibility studies or comprehensive cost of service analyses. Rates designed as a result of these engagements equitably recover the full cost of service, including special consideration for affordability and best practice rate structures. Ms. Terry has completed water and wastewater cost of service studies for the following utilities:

## Jessica B. Terry

### Senior Consultant

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- City of Borger, TX
- City of Greenville, TX
- City of Hobbs, NM
- Manville Water Supply Corporation
- North Slope Borough, AK
- Rockett Special Utility District

### Service Area Valuation

Ms. Terry has completed water supply service area valuations to determine compensation for decertification of areas covered by Certificates of Convenience and Necessity (CCN) for the following utilities:

- Rockett Special Utility District
- Walker County Special Utility District

### Water and Wastewater Procurement

#### City of Fort Worth, Texas

Ms. Terry evaluated the financial feasibility of submittals related to public private partnership opportunities for the City's water and wastewater operations. This evaluation included a life-cycle analysis of the submittals, evaluating the long-term benefits to the City and rate payers.

### Integrated Pipeline Project Financial Assistance

#### Tarrant Regional Water District (TRWD), Texas

Ms. Terry assisted TRWD with financial planning related to the \$2.3 billion Integrated Pipeline Project. TRWD partnered with the City of Dallas to construct the pipeline, which will run from Lake Palestine to Lake Benbrook, with connections to Cedar Creek and Richland-Chambers Reservoirs. Ms. Terry performed monthly recurring cash flow analyses to plan debt issues and ensure the project is sufficiently funded to proceed.

### Solid Waste Cost of Service and Rate Design

Ms. Terry has assisted cities in conducting cost of service analyses and rate design studies to help them understand the operational and financial impacts of their residential and commercial services. These studies typically design service rates for a five year period that will ensure the financial integrity of the operation. She has completed solid waste cost of service studies for the following cities:

- City of Tempe, AZ
- City of McKinney, TX
- City of New Braunfels, TX
- North Slope Borough, AK
- City of Santa Fe, NM
- County of Santa Fe, NM
- Santa Fe Solid Waste Management Agency

### Brush and Bulky Collection Operations Review

Ms. Terry performed collection analysis, evaluating current brush and bulk practices and determining alternative collection strategies. Operational areas evaluated include annual tonnage, material composition, equipment, collection schedule and crew configuration.

**Jessica B. Terry**  
Senior Consultant

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- City of Dallas, TX
- City of Midland, TX
- City of Tempe, AZ
- City of Phoenix, AZ

### **Municipalization Feasibility**

#### **City of Del Rio, Texas**

Ms. Terry evaluated the feasibility for the City of Del Rio, Texas to municipalize its solid waste collection and disposal operations, which are presently provided by a private contractor.

### **Recycling Collection and Processing Feasibility and Operational Review**

Ms. Terry has conducted financial and operational analyses of recycling collection and processing operations, evaluating recycling capacity, recycling rates and collection and processing operations. In addition, Ms. Terry has evaluated the feasibility of multiple alternative recycling collection and processing operations and quantified the financial benefits to operational changes. Ms. Terry has performed financial and operational recycling reviews for the following utilities:

- Fort Bliss, Texas
- City of Salina, KS
- City of Owasso, OK

### **Food Waste Collection Modeling**

#### **Pierce County, Washington**

Ms. Terry evaluated the collection operation requirements to implement different food waste collection initiatives in Pierce County, WA. Three potential programs were evaluated in this project, including various customer classes and volumes of food waste material.

### **Solid Waste Cost of Service and Operational Studies**

To fully understand a city's cost of service and the operational drivers of those cost, Ms. Terry has performed solid waste cost of service studies in conjunction with solid waste department operations reviews. After identifying the cost of service for the client, she identified operational efficiencies which will enable the city to decrease its' operational cost. She has completed solid waste cost of service and operational studies for the following cities:

- City of Corpus Christi, TX
- City of Coolidge, AZ
- City of Santa Fe, NM
- County of Santa Fe, NM
- Santa Fe Solid Waste Agency

### **Regional Recycling Benchmark Study**

#### **North Central Texas Council of Governments (NCTCOG)**

NCTCOG conducted a survey of 81 municipalities in the North Central Texas Region in order to update the regional recycling rate. Ms. Terry worked with municipalities and processors to collect recycling data. Ms. Terry also

## Jessica B. Terry

### Senior Consultant

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compiled and analyzed data to determine city recycling rates and a regional recycling rate. The recycling rates developed will serve as a benchmark to evaluate past and future recycling initiatives.

### Solid Waste and Recycling Procurement

#### The Tulsa Authority for the Recovery of Energy (TARE)

As part of a procurement process for the City of Tulsa to obtain contractors for residential collection of refuse and recyclables, processing of recyclables and waste to energy contracts, Ms. Terry performed a financial review of the bids received. The bids were considered as single and bundled bids.

#### City of Georgetown, Texas

Ms. Terry aided the City in a solid waste and recycling procurement, which included solid waste and recycling services for residential and commercial customers, as well as the operation of a transfer station.

## PRESENTATIONS

"Compensation Models for CCNs", Texas Rural Water Association's 44th Annual Convention, March 2013

Facilitated "Electric Cost of Service Course", Public Utility Commission of Texas (PUCT), September 2012



**Stephanie Crain**  
Staff Consultant  
scrain@newgenstrategies.net

Ms. Crain joined NewGen Strategies & Solutions, LLC as a consultant in May 2014. Prior to joining the firm, Ms. Crain served as a Solid Waste Analyst at SAIC Energy, Environment & Infrastructure, LLC. Ms. Crain has also served as a financial analyst for The Public Consulting Group, Inc. where she supported the following services to various public sector health institutions: Medicaid rate setting, CMS cost reporting, hospital bad debt analysis. Ms. Crain's area of focus primarily falls within utility cost of service, rate design, and financial analysis.

## EDUCATION

- Rice University, Bachelor of Arts in Mathematical Economic Analysis

## EXPERIENCE

*Some of the following projects were completed by Ms. Crain while employed by SAIC Energy, Environment & Infrastructure, LLC.*

### Financial Modeling

Ms. Crain assisted TRWD with financial planning related to the \$2.3 billion Integrated Pipeline Project. TRWD has partnered with the City of Dallas to construct the pipeline, which will run from Lake Palestine to Lake Benbrook, with connections to Cedar Creek and Richland-Chambers Reservoirs. Ms. Crain performed monthly recurring cash flow analyses to plan debt issues and ensure the project is sufficiently funded.

### Cost of Service

Ms. Crain has conducted cost of service analysis and rate design studies for the clients listed below. This service assists these entities in understanding the financial situations of their utility & operation. These studies designed service rates for a five year forecast to ensure the financial integrity of the operation.

- City of Bryan, TX
- Santa Fe Solid Waste Management Agency, NM
- City of Midland, TX
- City of Huntsville, TX
- City of Santa Fe, NM
- City of Nacogdoches, TX
- City of Superior, WI

### Financial Analysis

#### City of Dallas, Texas

Ms. Crain assisted in the evaluation of a market and financial analysis which examined the competitiveness of pricing for the City of Dallas' disposal services.

### Valuation

#### City of Midland, Texas

Ms. Crain performed an income approach analysis for the City of Midland's Landfill, which provided an indication of value to the City.

## Stephanie Crain

Staff Consultant

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### Reserve Analysis

#### Austin Energy, Texas

Ms. Crain evaluated Austin Energy's current reserve fund policies and corresponding funding levels to determine the financial sufficiency of the utility's reserves. As part of this effort, Ms. Crain tested cash balances to determine if historical funding targets had been achieved, performed industry research to identify best practices in developing funding targets, and surveyed financial rating agencies to clarify the level of cash reserves these agencies consider adequate in the rating process.

## Craig Niedermeier, P.E. Senior Project Manager

### Education

MS, Environmental and Water  
Resources Engineering, University of  
Texas, Austin

BS, Civil Engineering, University of  
Dayton

### Years of Experience

With AECOM: 14  
With other firms: 0

### Technical Specialties

Professional Engineer  
(Environmental), Texas, #93569,  
Issued 06/02/2004, Exp. 03/31/2014  
Professional Engineer, Oklahoma,  
#22097, Issued 12/15/2005, Exp.  
10/31/2014  
Professional Engineer, Missouri,  
#2007028628, Issued 09/13/2007,  
Exp. 12/31/2015  
Professional Engineer, Florida,  
#68053, Issued 05/28/2008, Exp.  
02/28/2015

Mr. Niedermeier is a program manager specializing in facility decommissioning and site remediation including design and construction management. Mr. Niedermeier has been the lead engineer in designing and overseeing the full-scale construction and implementation of various remedial designs as well as decommissioning and demolition projects throughout Texas. He is highly experienced with the planning of site remediation and demolition projects including the development of cost estimates.

### Project Experience

**Former Petroleum Terminal Facility Decommissioning.** Project manager for the decommissioning and demolition of a former terminal facility. Scope includes completing asbestos abatement, hazardous materials removal, tank, piping, and equipment demolition, and site grading for sinkhole mitigation.

**Major Oil and Gas Company, Pipeline Decommissioning, Texas.** Project manager for the isolation of a former transmission pipeline. Scope included completing a hot tap, de-oiling, and isolating the pipeline in support of property re-development.

**Major Oil and Gas Company, Decommissioning of Former Tank Batteries, Louisiana.** Project manager for several decommissioning projects that involve the decontamination and demolition of former tank batteries and associated above and below ground piping. Work included de-oiling and demolishing two 400-barrel steel and two 1,000-barrel galvanized aboveground storage tanks for off-site disposal and recycling.

**Underground Storage Tank Removal.** Program and project manager for the removal of several underground storage tanks (USTs). Scope of work generally included the de-oiling, decontamination, and removal of the USTs. Management activities included ensuring all work was completed in accordance with the appropriate state storage tank program requirements.

**Metal Plating Facility, Remedial System Design, Implementation, and Analysis, Waco, Texas.** Designed and implemented a remediation system to chemically reduce hexavalent chromium to trivalent chromium by addition of ferrous sulfate and calcium polysulfide. Methods of chemical introduction into the subsurface consisted of injection wells, direct high pressure injection, and infiltration trench.



**Oil and Gas Company, Enhanced Anaerobic Biodegradation, Texas.**

Designed a remediation system to enhance anaerobic degradation of BTEX constituents in groundwater at a former manufactured gas plant site in western Texas. Remedial system consisted of slowly adding sulfate to impacted groundwater to serve as an electron acceptor to promote BTEX degradation.

**Oil and Gas Company, LNAPL Recovery, Texas.** Evaluated various enhanced fluid recovery systems to remove light condensate, middle distillate, and gasoline plumes in the subsurface at a former manufactured gas plant in western Texas. Implemented and evaluated the effectiveness of enhanced fluid recovery using dual-phase removal by high vacuum, internal combustible engine (ICE), and pumping utilizing a compressed gas powered downhole pump.

**Oil and Gas Company, Solar-Powered Groundwater Recovery System, Michigan.** Designed, installed, and continue to evaluate a solar powered groundwater recovery system at a site impacted by a historical release of produced water. Solar powered energy provided a cost effective solution due to the remoteness of the site.

**Oil and Gas Company, Pulsed Air Sparging Systems, Michigan.** Lead engineer in retrofitting three existing sparging systems with timers to allow for pulsed operation. Designed and conducted a pilot test to determine the optimum pulsing frequency and flow rates. Continue to provide long term assessment of system performance.

**Oil and Gas Company, Surface Soil Restoration/Groundwater Recovery and Slurry Wall Trench, Texas.** Prepared a remedial design work plan to conduct surface soil restoration activities within a former sulfur blocking area in east Texas. Currently, in the process of designing a groundwater recovery trench and slurry wall to capture and dispose of acidic groundwater caused by the presence of residual sulfur.

**Major Railroad Company, Smelter Waste Impacted Property, Oklahoma.** Prepared a feasibility study to evaluate various remedial options and developed plans and specifications for the selected remedial approach at a railroad site in Oklahoma impacted by arsenic, cadmium, and lead from former smelting activities. Remedial design consisted of temporarily removing and replacing existing railroad tracks to remove and dispose of impacted soil and ballast material. Remediation activities also consisted of stabilizing material exhibiting metals concentrations exceeding regulatory limits.

**Former Refinery, Sludge Solidification/Geosynthetic Clay Liner Cap Installation, Kansas.** Provided construction oversight and served as the construction quality insurance inspection engineer for repair activities and cap installation of a 7.5-acre landfill at a former refinery. Remedial construction activities consisted of solidifying seep areas in the former thin clay cap and placing a geosynthetic clay liner over the entire landfill area.

**Oil and Gas Company, Solidification/Stabilization, Texas.** Provided technical assistance for implementation of a solidification demonstration at a former site in containing numerous sludge pits. Solidification demonstration consisting of evaluating various mixing procedures and determining the optimum proportion of bed ash to be mixed with soil impacted with TPH.

**Major Refinery, Compliance Tasking, Texas City, Texas.** Led in the development of compliance tasks for the waste group at a major refinery. Tasking is used by environmental staff at the refinery to ensure compliance with all federal, state, and local regulations.

# Dymek, Fred, P.E. Senior Power Plant Engineer

## Education

BS, Mechanical Engineering,  
Polytechnic Institute of New York

## Years Experience

AECOM: 13  
Others: 35

## Training and Certifications

OSHA 8-hour HazWOPER  
Refresher Training  
OSHA 8-hour HazWOPER  
Supervisor Training  
NU Switchyard Safety Training

## Professional Registrations

Licensed Professional Engineer:  
New York, Pennsylvania,  
Massachusetts, Wyoming

## Professional Associations

American Society of Mechanical  
Engineers (ASME) – Life Member  
National Society of Professional  
Engineers (NSPE)  
New York State Society of  
Professional Engineers (NYSSPE)

Mr. Dymek has extensive professional engineering experience in all aspects of the design, engineering, construction, and project management of various types of power generation and distribution facilities. Mr. Dymek has specialized experience working on power projects and has specific experience with the decommissioning and demolition of power plants including preliminary engineering and cost estimating, development of contract documents and specifications for contractor procurement and inspection and management of decommissioning and demolition work.

## Project Experience

**South East New York (SENY) Projects, New York Power Authority (NYPA), White Plains, New York.** Program /Project Manager for engineering, design and construction management activities.

- *825 MW Poletti Power Plant* - Initial planning and implementation of decommissioning and deconstruction of the power plant. Major tasks included: environmental & safety stabilization of plant equipment & systems; relocation of critical infrastructure; sale or salvage of material & equipment with useful material life; review of legal /regulatory requirements; estimated costs and overall milestone schedules.
- *Poletti Demineralization Plant & Auxiliary Boiler Plant* – Complete engineering, design, estimating & deconstruction technical specification and bid package preparation. Key tasks included: site characterization and underground facilities mapping /utility cut and cap locations; hazardous material survey and preparation of abatement specifications; site security and construction access/egress plans; assistance with bid review and contract award; construction management oversight of the selected contractor during demolition and site restoration.
- *Poletti Fuel Oil Storage Yard* – Construction management and inspection during the internal cleaning and subsequent deconstruction of (4) - 6 million gallon fuel oil tanks (160 foot diameter x 40feet high) and a pump-house & associated piping. This complex project included the abatement of ACM and LBP as well as the stripping/removal of residual product in the tanks, and recycling of 370,000 gallons and disposal of 410,000 gallons.
- *Poletti Sintering Plant* - The plant consisted of a 100 x 200 foot building; 60 foot diameter water tank and an 80 foot high ash silo and required the removal of ACM and LBP. Deconstruction contractor oversight, risk management and monitoring of safety.

**Confidential Power Company, Hazardous Materials and Asbestos Inventory and Development of Comprehensive Power Plant Closure Cost Estimate, New York.** Senior Engineer for the development of a comprehensive cost estimate to complete the decommissioning and demolition of a coal-fired power plant. The cost estimate accounted for all decommissioning and demolition activities as well as a number of other project wrap-around issues such as storm water management and railyard reconfiguration. Mr. Dymek worked with AECOM's project cost estimator to assure that the estimate contained the appropriate level-of-effort, staffing and equipment to complete each task of the project. He completed detailed site inspections and reviewed facility construction drawings to support the development of an estimate of scrap steel quantities and to identify key equipment which could be re-sold.

**Power Plant 2 Expansion, Freeport Electric, Incorporated Village of Freeport, Long Island, New York.** Served as Owner Engineer responsible for providing the review of design documents for constructability and "compliance to contract" for the installation of a General Electric LM6000 power plant. In addition to day-to-day construction oversight services, the team provided regular coordination of the high pressure gas and high voltage electric interconnect work. This task involved constant facilitation of the design/construction and interface between the various contractors, Key Span Energy and the Long Island Power Authority (LIPA)

**Equus Power I, L.P. Freeport, New York.** AECOM and Mr. Dymek were requested by the Project Developer to provide "Owner Engineer" services for the construction and interconnection services associated with the installation of another GE LM6000 Gas Turbine Generator with a nominal rating of 49MW adjacent to the PP2 unit. As part of this effort, Mr. Dymek provided recommendations regarding the "shared facilities" necessary between the two units and the natural gas supply and electric system interconnections.

**Powering Long Island Program, Long Island Power Authority (LIPA), Long Island, New York.** As the overall Program Manager and serving as LIPA's Owner Engineer, AECOM assigned Mr. Dymek as a Project Manager responsible from contract award to completion for all site activities and progress reporting associated with the installation of [2] two-unit General Electric LM6000 power plants and a single Pratt & Whitney FT8 unit. Mr. Dymek and his team provided comprehensive reviews in the areas of: planning & scoping, estimating & scheduling, bid analysis, constructability, budget & schedule as well as assistance with final inspections and project close out.

**Long Island Replacement Cable Project, Northeast Utilities Service Company (NUSCO), Berlin, Connecticut.** AECOM's Program Manager, reporting to NUSCO and LIPA the entities which co-own the cables. Mr. Dymek directed and coordinated the efforts of the AECOM Team which included personnel from its Environment sector and a subcontractor, Caldwell Marine. The Team provided construction oversight, recommendations and comprehensive reports on the performance of the EPC Contractor and its subcontractors regarding removal of the existing cables and installation and burial in the Long Island Sound of the new 138kV cables with a capacity of 300 MW. Also tasked to ensure contractor compliance with all applicable New York and Connecticut codes and permits.

## William Bachman

Senior Cost Estimator

### Education

MS, Building Science, Clemson University, 1991

BS, Building Construction, Clemson University, 1976

### Years of Experience

With AECOM: 13

With Other Firms: 25

Mr. Bachman has 37 years of field and office construction management experience for commercial, institutional, light industrial, and heavy industrial clients. He has expertise in preconstruction activities including cost estimating, value engineering, and contract negotiations. He has managed estimating for civil, structural, process piping, equipment setting, electrical, instrumentation, and general construction work. Prior to joining the Project Delivery Group, Mr. Bachman managed a 6-person estimating department (electrical, mechanical, civil structural) for \$20 million/year a construction operation. His department prepared 150 to 200 estimates a year with a 20% capture rate.

### Project Experience

#### **Other Category**

#### **City of Indianapolis, Deep Rock Tunnel Connector Pump Station, Indianapolis, Indiana.**

Project estimator for a \$90 million engineer's estimate for construction of a 90 MGD wastewater pump station. The scope of work included site preparation and underground utilities, construction of underground pump room and access shafts, construction of above ground pump station building and screen/grit structure. Project estimate included all civil, structural, architectural, utilities, HVAC, plumbing, process piping, process equipment, electrical and instrumentation. [2011]

**Petrom, PetroBrazi and Arpechim Refineries, Bucharest, Romania.** Project estimator for 28,650,000 Euros firm fixed price estimate for construction of access roads, site grading, bioremediation pads, lined landfill cells, stormwater/leachate collection and treatment systems and underground utilities at four site locations in Romania. [2011]

**Public Works and Government Services Canada, Port Granby, Ontario, Environmental Remediation.** Program estimator for environmental remediation of former low level radioactive waste dump site. The scope of work included excavation of 432,000 cubic meters of low level radioactive waste from an existing waste management facility, transportation of wastes to a new long term waste management facility, restoration of the existing facility following waste removal, construction of a new long term waste management landfill facility and construction of a leachate waste treatment plant. Value of remediation and construction work \$113 million CAD. [2010]

**Sydney Tar Ponds Agency, Environmental Remediation, Sydney, Nova Scotia.** Program estimator for environmental remediation of former steel plant manufacturing site. Project included multiple sites and design elements. Scope of remediation work included construction of a materials processing facility; solidification and stabilization of 600,000 cubic meters of contaminated soils; bypass pumping and redirection/reconstruction of two existing creeks, surface capping and grading; site restorations; slurry cut-off walls and sheet piling; groundwater collection systems and pump stations; wastewater treatment plant; engineered landfill construction. Value of remediation and construction work exceeds \$170 million CAD. [01/01/2008-12/31/2008]

**Georgia Pacific, Effluent Pump Station, Palatka, Florida.** Project estimator for \$35 million engineer's estimate for new effluent pump station, 20,000 linear feet of underground 36-inch DIP effluent line, and 4,000 feet HDPE river discharge diffuser. [01/01/2008-12/31/2008]

**Florida Department of Transportation, Miami Intermodal Center, Miami, Florida.** Project estimator for 30 year projection, \$300 million transportation facility operation and maintenance cost budget. [01/01/2008-12/31/2008]

**City of Saratoga, Alternative Water Supply Line, Saratoga, New York.** Project estimator for \$8 million engineer's estimate for construction of 22,000 feet of 16- and 24-inch ductile iron pipe water line. Scope of work included directional drilling for 1250 linear feet under the Hudson River. [01/01/2008-12/31/2008]

**Confidential Client, Soil and Groundwater Remediation, Marinette, Wisconsin.** Project estimator for \$27 million engineer's estimate for remediation

of arsenic-impacted soils and groundwater. Estimates included sheet pile and slurry type site containment walls, hydroponic site hydraulic control, cap construction, soil excavation and removal, site infrastructure demolition and relocations, groundwater recovery and treatment, hydraulic dredging of river sediments. [01/01/2007-12/31/2007]

**Petrom, PetroBrazi, and Arpechim Refineries, Acid Sludge Remediation, Bucharest, Romania.** Project estimator for \$19 million firm fixed price estimates for remediation 257,000 of cubic meters of acid sludges. The scope of work included sludge stabilization, dewatering and treatment, backfilling and site restoration. [01/01/2007-12/31/2007]

**Rompetrol, Vega Refinery, Bucharest, Romania.** Project estimator for \$3 million firm fixed price estimate for remediation 83,000 of cubic meters of acid sludges. The scope of work included sludge stabilization, backfilling and site restoration. [01/01/2007-12/31/2007]

**City of Indianapolis, Sanitary Sewer, Indianapolis, Indiana.** Project estimator for the advanced facilities plan of a new 35,000-foot-long 12-foot-diameter sanitary sewer connector between two existing sewer treatment plants. Facilities plan included five alignments with costs estimates for each. The scope of work included dewatering, sheetpiling and shoring, excavation and backfill, tunneling, reinforced concrete pipe installation, concrete structures and manholes, site restoration. [construction \$180 million] [01/01/2006-12/31/2008]

**US Army Corps of Engineers, Water Treatment Plants, Najaf, Deawnia and Dukon, Iraq.** Project estimator for engineer's cost estimate to construct three new water treatment plants in Iraq. Total project construction budget exceeded \$200 million. Work included raw water pump stations; raw water transmission lines; treatment plant structures, piping, electrical and process equipment; treated water transmission piping. [01/01/2006-12/31/2006]

**South Florida Water Management District, Flood Control Culvert, Miami, Florida.** Project estimator for a \$2.8 million engineer's cost estimate to construct a gated culvert for flood control within an existing canal. The scope of work included sheet pile shoring, dewatering, cast-in-place concrete box culverts and wing walls, erosion control measures and site development.

**City of Miami, Potable Water Line, Miami, Florida.** Project estimator for a \$50 million engineer's estimate to construct a 30,000-foot-long 72-inch-diameter underground potable water line. The scope of work included trench excavation and backfill, tunneling, PCCP concrete pipe installation, valving and flow controls, site demolition and restoration.

**US Environmental Protection Agency - Region V, Hog Island Inlet Remediation, Superior, Wisconsin.** Project estimator for a \$5.8 million firm fixed price estimate for remediation and restoration of the Hog Island Inlet of Lake Superior and Newton Creek. The project included site preparation, erosion control measures, sheet piling, Newton Creek flow diversion, dewatering of Hog Island Inlet, excavation and stabilization of 50,000 cubic yards of contaminated sediments, stream bed and stream bank restoration and revegetation. Project completed under budget and ahead of schedule. [01/01/2005-12/31/2005]

**Universal City Property Management, Former Lockheed Martin Site, Orlando, Florida.** Project estimator for a \$14 million firm fixed price remediation of a former Lockheed Martin industrial site to be developed into commercial and residential use. The project site consisted of seven individual SWMUs with the primary objective as groundwater remediation at all seven sites. The scope of work included remedial investigation, remedial design, installation of remedial action systems, operation and maintenance and long-term monitoring over the contract period of five years.

**Charter Steel Company, Water Treatment Facility, Cleveland, Ohio.** Project estimator for a \$7.3 million design-build process water treatment facility. Scope of work included design and construction of all civil, structural, mechanical, electrical, and process controls requirements for the new facility. [01/01/2005-12/31/2005]

**US National Park Service, Columbia Island Bridge, George Washington Memorial Parkway, Washington, DC.** Participated in a value engineering workshop for a \$4 million bridge over a boundary channel of the Potomac River. Work included analysis and evaluation of bridge substructure and superstructure,

bridge architecture, roadway, and civil designs for cost saving opportunities.  
[01/01/2005-12/31/2005]

**Triangle Transit Authority, High-Speed Rail System, Raleigh, North Carolina.** Supported development of an engineer's cost estimate for a \$40 million segment of a high-speed railroad transit line within the Raleigh city limits. The estimate included excavation and shoring systems, dewatering systems, temporary bridge construction, sound barrier walls, retaining walls and U section tunnel construction.  
[01/01/2005-12/31/2005]

**City of Roswell, Big Creek Park Wetlands Enhancement, Roswell, Georgia.** Project estimator for a \$2.5 million firm fixed price estimate (using Timberline) for the development of a municipal park around the existing wetlands of Big Creek. The estimate included site and clearing and grubbing, stream redirection and restoration, earthwork and grading, construction of concrete and timber boardwalk nature trails, landscaping and grassing. Project completed under budget.  
[01/01/2004-12/31/2004]

**AFCEE, Remedial Action at Site FT-001, Pope AFB, North Carolina.** Project estimator for a firm fixed price estimate (using Timberline) for design-build of soil and groundwater remediation at a former fire training area impacted by petroleum constituents. This was a cost-to-closure type bid with an end goal of a No-Further-Action determination by NCDENR within five years of contract initiation. The \$971,000 estimate included treatment system components, piping systems, control systems, electrical, soil excavation, and off-site disposal.

**Southern California Edison, Manufactured Gas Plant Site Remediation, Santa Barbara, California.** Project estimator for \$1.3 million lump sum/unit price estimate (using Timberline) for the removal of a former MGP holder and associated impacted soils and liquid. AECOM excavated to a depth of 15 feet to remove the gas holder, its base, and 1,500 cubic yards of surrounding impacted soil. The work was performed within a temporary structure equipped with air abatement equipment. Project was completed four weeks ahead of schedule and on budget.

**DuPont, Air Pollution Control, Wilmington, North Carolina.** Project estimator for a \$3 million estimate for installation of a thermal oxidation system for air pollution control at this fiber plant. Used Excel and the firm's historical data. This lump sum estimate included concrete foundations, equipment setting, structural steel supports, steel breaching (ductwork) from multiple processes within the plant, and all electrical and system controls. Project was constructed within budget. [Prior to AECOM]

**Hoechst Celanese, Groundwater Remediation, Spartanburg, South Carolina.** Project estimator for a \$2 million lump-sum bid for construction of a groundwater treatment system. Used Excel and the firm's historical data. Estimate included extraction wells, piping, treatment system, power, and system controls. Project was completed on time and within budget. [Prior to AECOM]

**Hoechst Diafoil, Groundwater Remediation, Greer, South Carolina.** Project estimator for a \$2.5 million lump-sum bid for construction of a groundwater treatment system. Used Excel and the firm's historical data. Estimate included extraction wells, piping, treatment system, power, and system controls. Project was completed on time and within budget. [Prior to AECOM]

**International Paper, Industrial Waste Landfill, Augusta, Georgia.** Project estimator for \$6 million estimate for construction of a 10-acre industrial waste landfill. Used Excel and the firm's historical data. Prepared estimates for liners, high permeability soils, leachate collection and treatment system (including force main), stormwater management and erosion controls. This T&M/NTE contract included incentives for safety, schedule, and cost savings, all of which were achieved by the company. [Prior to AECOM]

**BASF Plant, Various Capital Projects, Asheville, North Carolina.** Project estimator for construction costs for various plant expansions over a 4-year period totaling approximately \$10 million. Used Excel and the firm's historical data. Estimates were lump and involved all disciplines. Projects ranged in size from \$50,000 to \$2 million. [Prior to AECOM]

**Hoechst Celanese, Stack Construction, Spartanburg, South Carolina.** Project

estimator for design-build of a 100-foot stainless steel "chimney" stack, including stack foundation, ductwork/breaching from plant's multiple existing stacks, and fan equipment. Used Excel and the firm's historical data. Project was completed within budget. [Prior to AECOM]

## **Martin F. Hammer** **Chief Estimator**

### **Professional History**

02/1998 - Present, AECOM Chief Estimator and Project Manager  
03/1989 - 01/1998, MCI Constructors Inc Chief Estimator/Project Manager  
08/1987 - 12/1988, Danis/Shook Assistant Project Manager/Project Engineer  
08/1984 - 08/1987, Olson Construction Co Project Manager  
01/1984 - 08/1984, Vet-O-Vitz Masonry Systems Inc Quality Control/Field Engineer

### **Education**

BS, Construction Management, Bowling Green State University, 1984

### **Years of Experience**

With AECOM: 18  
With Other Firms: 14

### **Professional Affiliations**

American Association of Cost Estimators  
American Society of Professional Estimators

### **Training**

Colorado School of Mines Pilot Tube and Microtunneling Short Course  
CPM Scheduling Seminar  
Precision Extended Estimating CE4P03 4-day Basic Training  
Construction Quality Management for Contractors Course  
Precision Estimating CE4P03 4-day Advanced Training

Mr. Hammer is a director and chief estimator with the Office of Risk Management and is responsible for identification, estimating, bidding, and management of projects. The group averages the generation of 180 estimates with a construction value of over \$9 billion/year. Mr. Hammer has 30 years of experience in the construction industry and has participated in or managed the estimating and bidding of hundreds of construction projects. He has expertise in various estimating software packages, including Sage Timberline Estimating, Composer Gold (MCACES), MII, MC2, SUCCESS Estimator, Lotus 1-2-3 and Microsoft Excel spreadsheets, Estimation, Inc., In-Site, Topo, Pay Dirt, OnScreen TakeOff, and the Link Mechanical Estimating system developed by Limbach Corporation. In addition, he is familiar with the implementation of Parametric Estimating software such as TRACER, RACER, and PACES estimating. Mr. Hammer has been involved in construction of more than 25 projects of various complexities and magnitudes including water and wastewater treatment systems; commercial developments; airport concourses; office buildings; incinerators; boiler plants; chiller plants; cable stations; telexchange buildings; utility pipelines; tunnels; trenchless pipelines; petroleum, oil, and lubricants (POL) facilities; landfill caps; landfill cell developments; and a variety of groundwater treatment, soil vapor extraction, underground and aboveground storage tank removals/installs, mechanical dredging, hydraulic dredging, soil treatment, and remediation projects. He has served in multiple roles, including layout engineer, field engineer, project engineer, field superintendent, project manager, estimator, estimating manager, and chief estimator for projects ranging in size to over \$5.5 billion. Mr. Hammer also has strong experience in project scheduling, including the implementation of Primavera P6, Primavera SureTrak, and Microsoft Project. Project controls systems have included Primavera Expedition, Olson Construction Companies' (OCC) in-house Project Management software, Computer Guidance Corporation (CGC), ARES Prism, and an internal Project Cost Control System (PCS). He is knowledgeable in various construction trades, including demolition, heavy civil, site work, tunneling, utility work, yard piping, concrete work, masonry, structural, metals, finishes, HVAC, mechanical, electrical, and instrumentation.

### **Experience**

**Phillips 66, Clooney Lake EDC Remedial Project, Westlake, California.** Chief estimator for this performance based remediation winning proposal. Consisted of a pilot study, in situ thermal treatment of 1,250 cubic yards, and full scale in situ thermal treatment of 110,000 cubic yards. [\$24.6 million; 12-076]

**Phillips 66, Clooney Lake EDC Remedial Project, Lake Charles, Louisiana.** Chief estimator for this performance based remediation winning proposal. Consisted of a pilot study, in situ thermal treatment of 1,250 cubic



yards, and full scale in situ thermal treatment of 110,000 cubic yards. [\$24.6 million; 12-076]

**City of Akron, Ohio Canal Interceptor Tunnel Project, Akron, Ohio.**

Chief estimator for the design development of various projects including 6,135 linear feet of 28-foot diameter stormwater conveyance and storage tunnel with launch and recovery shafts main outfall sewer rehabilitation, OCI tunnel, MOPI box culvert, parallel relief sewers, various alternatives, and value engineering analysis. Prepared 12 estimates totaling \$479.9 million. [12-060]

**Metrolink, State Route 710 Freeway, Los Angeles, California.**

Chief estimator for this opinion of probable construction cost for a light rail expansion consisting of aerial structures, 48,170 linear feet of twin 23 foot diameter tunnels, above and below grade substations, and five associated parking lots [\$2.1 billion; 12-059]

**US Agency for International Development, Al Ekerder Wastewater**

**Treatment Lagoon, Evaporation and Sludge Solidification, .** . Provided opinion of probable construction cost for this WWTP, consisting of evaporative ponds (446,100 m3 volume) and 83,331 m3 of solids solidification. [\$7.7 million; 12-067]

**Miami-Dade Water and Sewer Authority, Norris Cut - Phase II, Miami,**

**Florida.** Lead and chief estimator for developing engineer's estimates in support of preliminary design for the design-build effort for the Phase II of the Norris cut 60-inch force main tunnel from Virginia Key to Fisher Island with tunnel applications. [\$42.8 million]

**Broward County, Broward County Courthouse #002, Broward County,**

**Florida.** Chief estimator for this detailed cost estimate for the fire protection, plumbing, HVAC, and electrical changes to the existing court house, and five change order estimates. [\$5.9 million; 12-026]

**Miami-Dade Water and Sewer Authority, Government Cut Program,**

**Miami, Florida.** Lead estimator for developing engineer's estimates in support of preliminary design for the design-build effort for the replacement of existing 20-inch water main and 54-inch sewer force main from Fisher Island to Miami Beach and the Port of Miami, with tunnel applications, inclusive of 12 design alternatives. [\$82.8 million]

**City of Oxnard, Oxnard Advanced Water Treatment Plant, Oxnard,**

**California.** Chief estimator for the development and evaluation of 204 priced change orders, totaling more than \$27 million. [09-041]

**City of Annapolis, Annapolis Water Treatment Plant, Annapolis,**

**Maryland.** Chief estimator for this 8-mgd design-build water treatment plant. [\$30,542,161]

**City of Hamilton, Woodward Avenue Wastewater Treatment Plant,**

**Hamilton, Ontario.** Chief estimator for the capital cost estimate pricing for this WWTP design-build project. The scope of work included a 1,130-mld raw wastewater pump station consisting of vertical pump station, a 2-cell wet well, and dry pit pump room consisting of 12 – 700-hp vertical

centrifugal wastewater pumps. The vertical pump station is 44-meter diameter x 47-meters deep. Additional scope included new south plant aeration basins, tertiary treatment, chlorine contact tank, and energy centre housing of 13.8-kV switchgear and three backup generator sets replacement power grid for plant; railway realignment; and outfall and creek upgrades. [\$332 million; 12-063]

**Metropolitan Water Reclamation District of Greater Chicago, Stickney Water Reclamation Plant Gravity Thickener Improvement Program, Chicago, Illinois.** Chief estimator for providing change order pricing substantiation for the negotiation of contractor submitted change orders. [\$201.5 million]

**US Air Force Center for Engineering and the Environment, New England Air Force Bases Performance Based Remediation, , Massachusetts.** Chief estimator for this performance based remediation project, consisting of 4 bases and 38 sites and basewide groundwater plumes. AECOM was a major teaming partner on this project. [\$13,841,881]

**US Air Force Center for Engineering and the Environment, New England Air Force Bases Performance Based Remediation, , New York.** Chief estimator for this performance based remediation project, consisting of 4 bases and 38 sites and basewide groundwater plumes. AECOM was a major teaming partner on this project. [\$13,841,881]

**US Army Corps of Engineers - Tulsa District, Longhorn Army Ammunitions Plant, Karnack, Texas.** Chief estimator for this successful performance based remediation project, consisting of 16 sites and basewide groundwater plume. [\$23,280,399]

**US Air Force Center for Engineering and the Environment, Former March ARB and March ARB Performance Based Remediation, March ARB, California.** Chief estimator for this successful performance based remediation project, consisting of 28 sites and basewide groundwater plume. [\$15,867,745]

**US Air Force Center for Engineering and the Environment, Joint Base Elmendorf-Richardson and Clear Air Force Station Performance Based Remediation, Clear AFS, Alaska.** Chief estimator for this successful performance based joint venture remediation project, consisting of 7 sites and 2 landfills. [\$3,903,642]

**US Air Force Civil Engineer Support Agency, Repair/Replacement of Runway 01L/19R, McConnell AFB, Kansas.** Chief estimator for this 12,000-linear-foot runway repair/replacement proposal. Inclusive of runway/shoulder, and NAV aids demolition, recycling, and replacement of PCC and RMA paving. [\$47.5 million]

**Village of Islamorada, Lower Matecumbe Force Main and Treatment System, Islamorada, Florida.** Lead and chief estimator this successful low bid design-build-operate-finance (DBOF) of a sewer collection and treatment system. [\$224,213,000]

**US Air Force Center for Engineering and the Environment,**

**Performance Based Contracting, Tyndall AFB, Florida.** Chief estimator for the proposal, consisting of 51 sites and inclusive of remedial investigation, remedial design, remedial action, and long-term monitoring and operations and maintenance. [\$34.3 million]

**US Air Force Civil Engineer Support Agency, Repair/Replacement of Runway 15/33, Charleston AFB, South Carolina.** Chief estimator for this 12,000-linear-foot runway repair/replacement proposal. Inclusive of runway/shoulder and NAV aids demolition, recycling and replacement of PCC, and RMA paving. [\$46.2 million]

**Brownsville Public Utility Board, Robindale Wastewater Treatment Plant, Brownsville, Texas.** Chief estimator for this joint venture design-build of a 12.3-mgd water treatment plant. [\$27.1 million]

**Public Works and Government Services Canada, Peninsula Harbour Sediment Remediation, Marathon, Ontario.** Lead estimator for developing the engineer's estimate for the construction of a 26.62-hectare (18,200 m<sup>3</sup>) sand cap to in-situ cap lead contaminated sediment. Work consisted of bathymetric survey, implementation of sediment/turbidity curtains, and marine quality monitoring. [CDN \$5.9 million]

**US Air Force Center for Engineering and the Environment, Performance Based Contracting, Tinker AFB, Oklahoma.** Chief estimator for the proposal, consisting of 34 sites and inclusive of remedial investigation, remedial design, remedial action, and long-term monitoring and operations and maintenance. [\$31 million]

**Tata Steel Minerals Canada Limited, Direct Shipping Ore, Schefferville, Quebec.** Chief estimator for this conceptual estimate of an iron ore mine redevelopment, consisting of haul roads; dome structure; ore processing and beneficiation plant; tailings disposal facility; product drying, storage, and load out; 635 kilometers of new rail spur; rotary car dump utility systems; repair facilities; water treatment plant/wastewater treatment plant; and camp. [CDN \$421.5 million]

**City of Ocoee, Water and Force Main Replacement, Ocoee, Florida.** Lead estimator for the engineer's estimate for the replacement of existing 6-inch force main and 8-inch water main, including bridge approach and bridge pipeline over a wet land condition. [\$756,000]

**Flambeau River Biofuels Inc., Capital Cost Estimate Evaluation, Park Falls, Wisconsin.** Chief estimator for project cost assessment regarding the development of a Trixie (liquid fuels from Biomass) facility. [\$277 million]

**US Air Force Center for Engineering and the Environment, Performance Based Contracting, Pease ANG Base, New Hampshire.** Chief estimator for the proposal, consisting of 60 sites and inclusive of remedial investigation, remedial design, remedial action, and long-term monitoring and operations and maintenance. [\$33.6 million]

**US Air Force Center for Engineering and the Environment, Performance Based Contracting, Loring AFB, Maine.** Chief estimator for the proposal, consisting of 60 sites and inclusive of remedial investigation,

remedial design, remedial action, and long-term monitoring and operations and maintenance. [\$33.6 million]

**US Air Force Civil Engineer Support Agency, Mechanical and Electrical Upgrades and Improvements, Misawa AB, .** Chief estimator for the engineer's estimate(s) at the 30%, 60% and 90% design levels, consisting of nine tasks in the refurbishment and upgrade of the existing AFB, inclusive of replacement of alarm systems, repair fire alarms, upgrade fire alarm systems in dorms, repair mass notification systems, repair HAS drain system, repair 50/60Hz converter plant, HVAC controls, replace H-frame transformer, and MSOC HVAC building 1500. [\$22.6 million]

**North Dakota State Water Commission, Devils Lake East Outlet, Devils Lake, North Dakota.** Chief estimator for the preliminary design review through 70% design for pump station/inlet, outlet structure, headworks, and pipeline engineer's estimate during design for flood control. Evaluated options included canal (405,000 lf), pipeline (14,000 lf), and tunnel (8,000 lf) format. [\$544 million]

**Metropolitan Water Reclamation District of Greater Chicago, Kirie Pump Station, Chicago, Illinois.** Chief estimator for providing change order pricing substantiation for the negotiation of contractor submitted changes orders. [\$400 million]

**DC Water, MPT Biosolids Design-Build, Washington, District of Columbia.** Chief estimator for the proposal of a design-build teamed with another firm. Scope of work included the design and construction of screenings, pre-dewatering, Cambi thermal hydrolysis process, digestion, flares, biofilters, solids blending, start-up, and commissioning. [\$211.8 million]

**Confidential Client, Anaconda Uplands and Remedial Design Unit 14, Anaconda, Montana.** Chief estimator for this firm-fixed-price proposal for the environmental remediation/stabilization via soil cover and in-situ treatment (tilling/blending) and revegetation of more than 20,000 acres of impacted soils relative to a former smelter site. [\$74.9 million]

**Petrom, Petroleum Facilities, Ticelni, .** Chief estimator for the successful firm-fixed price proposal(s) of four different petroleum facilities, consisting of remediation and construction of biotreatment pad and landfills. [25 million Euros]

**Petrom, Petroleum Facilities, Ceisti, .** Chief estimator for the successful firm-fixed price proposal(s) of four different petroleum facilities, consisting of remediation and construction of biotreatment pad and landfills. [25 million Euros]

**Petrom, Petroleum Facilities, Baresti, .** Chief estimator for the successful firm-fixed price proposal(s) of four different petroleum facilities, consisting of remediation and construction of biotreatment pad and landfills. [25 million Euros]

**Petrom, Petroleum Facilities, Indepentia, .** Chief estimator for the successful firm-fixed price proposal(s) of four different petroleum facilities,

consisting of remediation and construction of biotreatment pad and landfills. [25 million Euros]

**Public Works and Government Services Canada, Radioactive Waste Transport, Port Granby, Ontario.** Chief estimator for developing Class D, C, B, and an opinion of probable construction cost in support of design development efforts from conceptual to definitive, inclusive of excavation of 432,000 cubic meters of low-level radioactive waste from an existing waste management facility, and transportation of wastes to a new long-term waste management facility. [\$113.1 million]

**Maybrook & Harriman Environmental Trust, Maybrook Superfund Site Biocell, Hamptonburgh, New York.** Lead estimator for the proposal to implement AECOM's design of a biocell, consisting of in-site remediation of impacted soils. Inclusive of the development and encapsulation of stabilized soils within a 10,000 square yard HDPE lined and capped biocell, soil vapor extraction (SVE) system. [\$3 million]

**US Air Force Center for Engineering and the Environment, Performance Based Contracting, Kelly and Lackland AFB, Texas.** Chief estimator for the proposal, consisting of 39 sites and inclusive of remedial investigation, remedial design, remedial action, and long-term monitoring and operations and maintenance. [\$51.3 million]

**Husky Energy, Wastewater Treatment Plant, Prince George, British Columbia.** Chief estimator for developing a conceptual engineer's estimate (FEED level) in support of the design of this refinery WWTP. [CAD \$10.8 million]

**City & County of Honolulu, Honolulu Cogeneration Study, Honolulu, Hawaii.** Chief estimator for this cogen study, consisting of costing and evaluating three alternatives of fuel cell, micro turbine, and reciprocating engines. [\$51 million]

**New Brunswick Development Corporation, Dominion Mine Site Restoration, , New Brunswick.** Chief estimator for this former mine site restoration. [\$21.9 million]

**Sewerage and Water Board of New Orleans, Water Pump Station, New Orleans, Louisiana.** Chief and lead estimator for development of a conceptual engineer's estimate in support of a 220-mgd finish water pump station. [\$60 million]

**City of Janesville, Janesville Wastewater Treatment Plant, Janesville, Wisconsin.** Chief and lead estimator for the engineer's estimate for the 50% and 100% design stages of this 20-mgd plant. [\$32.2 million]

**City of Baltimore, Back River Wastewater Treatment Plant Scum and Fog Improvements, Baltimore, Maryland.** Chief estimator responsible for development of program estimates ranging from Level 1 conceptual to Level 5 definitive for these scum and grease system improvements. [\$6.2 million]

**City of Indianapolis, Deep Rock Tunnel Connector Value Engineering Workshop, Indianapolis, Indiana.** Chief estimator as part of a VE team

responsible for the development and summarization of 69 value engineering alternatives for evaluation at the 30% design level. [\$6.2 million]

**City of Indianapolis, Deep Rock Tunnel Connector Pump Station, Indianapolis, Indiana.** Chief estimator for this 30% design estimate of a 40-mgd underground cavern pump station, designed to supplement the combined stormwater tunnel transportation storage system. Also included value engineering sessions for design and alternative evaluation and recommendations. [10-034]

**US Air Force Civil Engineer Support Agency, Repair/Replacement of Runway 05/23, Fairchild AFB, Washington.** Lead estimator for development of a winning bid for a 14,000-linear-foot runway repair/replacement project. Inclusive of runway/shoulder and NAV aids demolition, recycling, and replacement of PCC and RMA paving. [\$42.9 million]

**Yukon Energy, Aishihik Generating Station, Yukon, Alaska.** Chief estimator for the turbine replacement. Inclusive of penstock connection, switchyard work, and turbine replacement. [\$7.6 million]

**US Air Force Civil Engineer Support Agency, Repair/Replacement of Runway 05/23, Fairchild AFB, Washington.** Chief estimator for this winning estimate, inclusive of demolition and replacement of concrete runway, taxiways, asphalt overruns and shoulders, drainage layer, NAVAIDS airfield, and approach lighting. [\$43,538,814]

**Dynamic Research Testing Laboratories, LLC, Central Reference Laboratory Facility, Almaty, .** Chief estimator for evaluating cost reasonableness of engineer's estimates in support of the demolition, site works, and structure modification. [\$1.7 million]

**Sewerage and Water Board of New Orleans, 17th Street, London, and Orleans Canal Work, New Orleans, Louisiana.** Lead estimator for developing engineer's estimates in support of the S&WB evaluation of preliminary design canal pump stations and canal rework options for the 17th Street, London, and Orleans canals. Inclusive of pump station modifications and three canal design alternatives. [\$5.5 billion]

**US Air Force Civil Engineer Support Agency, A-E Services for Repair Runway 01L-19R, Andrews AFB, Maryland.** Chief estimator for developing opinions of probable construction cost in support of design development efforts from conceptual to definitive for runway and runway lighting replacement. [\$112.8 million]

**Regional Municipality of York, Southeast Collector Tunnel, Toronto, Ontario.** Chief and lead estimator for the engineer's estimate for the 30%, 60%, 90%, and 100% design stages of 15,005 meters of a 3.6-meter stormwater tunnel with 21 support structures. [CAD \$276.8 million]

**Regional Municipality of York, Odor Control Southeast Collector Tunnel, Toronto, Ontario.** Chief and lead estimator for the engineer's estimate for the 30% and 70% design stages of odor control system for 15,005 meters of tunnel and 21 support structures. [CAD \$20.5 million]

**Sydney Tar Ponds Agency, Sydney Tar Ponds Remediation, Sydney, Nova Scotia.** Chief estimator for developing opinions of probable construction costs in support of design development and remediation of the former coke plant efforts from conceptual to definitive. [\$1.7 billion]

**City of San Jose, Sewer Replacement Studies, San Jose, California.** Chief estimator for developing the opinion of probable construction cost by generating an estimate class level two rough order of magnitude engineer's estimates to evaluate 11 alternatives in support of a 10% preliminary design. Features include 60-inch, 72-inch, and 84-inch-diameter pipelines, inclusive of open cut-and-tunneling options of RCP, steel, DIP, and TBM precast tunneling liner. [\$328.8 million]

**Town of Davie, Water Treatment and Wastewater Treatment Plant, Davie, Florida.** Chief estimator for developing the GMP estimate in support of a 60% preliminary design for the winning design-build proposal for the design-build of a new 6-mgd, expandable to 12-mgd, WTP and a new 3.5-mgd, expandable to 7-mgd plant. [\$104.7 million]

**City of Hialeah, Brackish Water Reverse Osmosis Water Treatment Plant, Hialeah, Florida.** Chief estimator for developing the guaranteed maximum price (GMP) estimate, as part of a joint venture with Veolia Water, in support of 60% design for the winning design-build proposal for the design-build of 10-mgd reverse osmosis plant, expandable to 17.5 mgd. [\$48.9 million]

**Confidential Client, Tallevast Design-Build Remediation, Sarasota, Florida.** Lead and chief estimator for developing this winning design-build proposal for the one year remedial action plan (RAP). Inclusive of pump and treatment system, 77 vertical groundwater extraction wells, and 4 deep groundwater extraction trenches. [\$24 million]

**Port Authority of New York and New Jersey, JFK Security Capital Program Design and Technical Services, Jamaica, New York.** Project manager for estimating services in support of design efforts at various stages to establish an opinion of probable cost for Stage III and IV engineering services for pilot installation of an energy-absorbing, anti-ram vehicle protection barrier at Guard Post Hotel at the airport.

**Metropolitan Water Reclamation District of Greater Chicago, Stickney Water Reclamation Plant Gravity Thickener Improvement Program, Chicago, Illinois.** Chief estimator for developing opinions of probable construction cost in support of design development efforts from conceptual to definitive. [\$201 million]

**US Department of Energy, Portsmouth Gaseous Diffusion D&D Landfill, Piketown, Ohio.** Chief estimator for the engineer's estimate for conceptual design of the on-site waste disposal facility, consisting of a 130-acre landfill. [\$240.9 million]

**Fairfax County, Noman Cole Pollution Control Plant Wastewater Treatment Plant Upgrades Program, Fairfax, Virginia.** Chief estimator for the design program for development of opinion of probable construction cost

of 20 estimates of design development efforts from conceptual to definitive, inclusive of MBBR, AST improvements, and reclaimed water projects. [\$54 million]

**Urbaser, LA Top Waste-to-Energy Facility, Los Angeles, California.** Chief estimator for the design-build-operate (DBO) energy facility. [\$436.8 million]

**Miami-Dade Aviation Department, Miami-Dade Airport - Miami Intermodal Station Operation and Maintenance, Miami, Florida.** Chief estimator for the 30-year program to provide O&M services for the 5-agency facility. [\$236.6 million]

**New York Department of Environmental Protection, Croton Water Treatment Plant, Bronx, New York.** Chief and lead estimator for construction management program, developing change order estimates for negotiation and settlement with prime and subcontractors on the \$2 billion plant construction. [\$3.7 million]

**Rio Tinto Alcan Inc., Aluminum Smelter Modernization, Kitimat, British Columbia.** Chief estimator for the Level 4 project control engineer's estimate for the cleaning, demolishing, and disposing of 82 buildings. [CAD \$15 million]

**Charter Steel, Meltshop Improvements, Cleveland, Ohio.** Chief and lead estimator for the Level 2 conceptual engineer's estimate for structure/system improvements of the rolling mill waste treatment plant. [\$28.9 million]

**Metropolitan Milwaukee Sanitary District, Biosolids Vitrification (Minergy), Milwaukee, Wisconsin.** Chief estimator for the Level 1 estimate for proprietary system installation and subsequent concessions. [\$41.2 million]

**Confidential Client, Dryer Study, Detroit, Michigan.** Chief estimator for this preliminary study for including evaluation of two alternatives. [\$75.8 million]

**Urbaser, Johnson Canyon Waste to Energy Facility, Gonzales, California.** Chief estimator for this design-build-operate (DBO) energy facility. [\$431.4 million]

**National Cooperative Refinery Association, API-DAF, McPherson, Kansas.** Estimator for the engineer's estimate of a collection system, lift station, API separators, clarifiers, sludge float tanks, transfer piping, and thermal oxidizers. [\$16.1 million]

**US Environmental Protection Agency - Region II, ERRS-Hudson River PCBs Superfund Site Alternative Water Supply, Waterford and Halfmoon, New York.** Chief estimator for the construction cost estimate for the installation of six miles of transmission main including 1,000 feet of HDD under the Hudson River. [\$8.3 million]

**Confidential Client, Biofuels Project, Park Falls, Wisconsin.** Chief



estimator for the Class 30 study and estimate of a wood (biomass) to oil process energy plant, inclusive of biomass receiving, storage and handling, biomass linear reclaimer, biomass dryers, biomass storage bins, steam reformers, syngas conditioning, syngas compression, fixed bed Fischer Tropsche GTL, and energy recovery. [\$514 million]

**Florida Department of Transportation, Miami Intermodal Center Operation and Maintenance, Miami, Florida.** Chief estimator for this 30-year operation and maintenance estimate, which included pedestrian concourse, TR rail station, bus terminal, and associated exterior parking, landscaping, and common areas. [\$305 million]

**Confidential Client, Rice Creek Enhancements, Palatka, Georgia.** Chief estimator for the engineer's estimates for the engineering and construction of a wetland education outdoor classroom and walkway, and systems associated with supplying oxygenated water over a 140-acre site. [\$32.8 million]

**US Air Force Center for Engineering and the Environment, Bowling Center Design-Build, Eglin AFB, Florida.** Chief estimator for the design-build 28-lane bowling center with concessions. [\$10.9 million]

**Miami-Dade Water and Sewer Department, Government Cut Water Reroute, Miami, Florida.** Chief estimator for the order-of-magnitude engineer's estimate evaluating five routes/methods of rerouting the existing 60- and 20-inch water lines from to Fisher Island. [\$1.332 billion]

**US Air Force Center for Engineering and the Environment, Apra Harbor Wastewater Treatment Plant, Andersen AFB, .** Chief estimator for the design-build wastewater treatment plant expansion and upgrade. [\$40.4 million]

**US Air Force Civil Engineer Support Agency, Runway 01L-19R Design, Andrews AFB, Maryland.** Chief estimator for the engineer estimates of this runway repair, consisting of runway, overruns, touchdown zones, taxiways, shoulders, signage, and runway and threshold lighting. [\$78 million]

**Fairfax County, Noman Cole Pollution Control Plant Nutrient Reduction Program, Fairfax County, Virginia.** Chief estimator for this engineer's estimate for the PDR and 30% design Package 3 equalization tank expansion. [\$4.8 million]

**Fairfax County, Noman Cole Pollution Control Plant Nutrient Reduction Program, Fairfax County, Virginia.** Chief estimator for this engineer's estimate for PDR and 30% design Package 2 AST improvements. [\$10.5 million]

**Abbott Nutritional, Industrial Pretreatment System, Baltimore, Maryland.** Chief estimator for the design-build of a new 1.2-mgd wastewater pretreatment facility, consisting of equalization, neutralization, biological treatment, sludge dewatering, and storage. [\$15.9 million]

**Fairfax County, Noman Cole Pollution Control Plant Nutrient Reduction Program, Fairfax County, Virginia.** Chief estimator for the

engineer's estimate for PDR and 30% design Package 1 MBBR, screens, methanol, and blower. [\$53.5 million]

**US Army Corps of Engineers, Firing Range No. 3, MCB Quantico, Virginia.** Chief estimator for the engineer's estimate evaluating four design options for range remediation and berm construction. [\$1.3 million]

**Confidential Client, Soil Remediation, Marinette, Wisconsin.** Chief estimator for \$27 million engineer's estimate for remediation of arsenic impacted soils and groundwater. Estimates included sheetpile and slurry type site containment walls, hydroponic site hydraulic control, cap construction, soil excavation and removal, site infrastructure demolition and relocations, groundwater recovery and treatment, and hydraulic dredging of river sediments.

**Petrom, PetroBrazi and Arpechim Refineries, Bucharest, .** Chief estimator for \$19 million firm fixed price estimates for remediation of 257,000 cubic meters of acid sludge. The scope of work included sludge stabilization, dewatering and treatment, backfilling, and site restoration.

**Rompetrol, Vega Refinery, Bucharest, .** Chief estimator for \$3 million firm fixed price estimate for remediation of 83,000 cubic meters of acid sludge. The scope of work included sludge stabilization, backfilling, and site restoration.

**City of Nashville, Biosolids Central Wastewater Treatment Plant, Nashville, Tennessee.** Chief estimator for value engineering and change order work for the biosolids design in support of our joint venture. Including the generation and negotiation of 20 change orders valued at \$1.7 million credit and six change orders valued at \$1.4 million credit.

**Miami-Dade Water and Sewer Department, Raw Water Line, Doral, Florida.** Chief estimator for design construction estimate for 30,700 feet of 72-inch-diameter pipeline. Estimates and evaluation included the use of PCCP pipe, epoxy lined spiral welded steel pipe, fiberglass pipe, in open cut and casing installation. Included the estimating and cost feasibility evaluation of four alternative alignments. [\$55 million]

**Northrop Grumman Electronic Systems, (AIMS) Circuit Board Manufacturing Wastewater Pretreatment, Lithicum, Maryland.** Chief estimator for this pretreatment system inclusive of ion exchange, membrane filtration, and granular carbon activation. [\$3 million]

**Metropolitan Water Reclamation District of Greater Chicago, Stickney Sludge Thickening, Chicago, Illinois.** Provided quality assurance/quality control and constructibility reviews of 60% preliminary design review, 98% preliminary design review, and 60% designs.

**Duke Power, Shelbyville MFP Site Remediation, Shelbyville, Indiana.** Chief estimator for this 9,528-cubic-yard remediation design. Estimates include estimate generation and evaluation of various clean-up methods, including dig-and-haul, chemical oxidation, and physical stabilization.

**City of Indianapolis, Belmont-to-Southport AWT Interplant Connection,**

**Indianapolis, Indiana.** Chief estimator for the engineer's estimate to support the design effort of a 33,000-linear-foot 144-inch-diameter sewer line. Generated five routing and method options to determine most feasible design, inclusive of 38-foot direct bury depth and tunneling. [\$139.934 million to \$258.9 million]

**US Air Force Center for Engineering and the Environment, Water Treatment Plants, Najaf, Dwania, and Dukon, .** Chief estimator for the engineer estimates inclusive of Level 1, 3, 4, and 5 estimates of 30%, 60% 90%, and 100% design of water treatment plants, located throughout Iraq. Plant capacities are 2,000 cm/hour, 4,000 cm/hour, and 6,000 cm/hour. [\$225 million]

**South Florida Water Management District, C-9 Impoundment BODR, Miami-Dade County, Florida.** Chief estimator for the Level 1 engineer's estimate based on preliminary conceptual design of a 1,670-acre stormwater/groundwater impoundment along with its associated canals, levees, pump station, and weir structures. Two alternative designs were evaluated. [\$136.1 million to \$166.5 million]

**South Florida Water Management District, EAA Bolles Canal Improvements BODR, Miami-Dade County, Florida.** Chief estimator for the Level 1 engineer's estimate based on preliminary conceptual design of two canals (L-16 and L-21) totaling 18.8 miles in length. Two alternative designs per canal were evaluated. [\$98.2 million to \$519.6 million]

**Irvine Ranch Water District, Harvard Avenue Trunk Sewer Line, Irvine, California.** Chief estimator for the Level 3 engineer's estimate for the design and construction of 6,500 feet of 54-inch gravity sewer line, including five alternative layout designs. [\$6.2 million to \$13.6 million]

**Town of Berryville, Wastewater Treatment Plant Effluent Force Main, Berryville, Virginia.** Lead estimator for the Level 2 engineer's estimate for 21,210 feet of 12-inch (16-inch) PVC force main including jack and bore applications. [\$1.8 million to \$1.9 million]

**San Diego Unified Port District, Gaylord Hotel and Convention Center, San Diego, California.** Chief estimator for the Level 1 engineer's estimate for the rough order-of-magnitude estimate for the development of a 1,500-room, 183,959-square-foot hotel, and 781,390-square-foot convention center facility. [\$504.2 million]

**Metropolitan Transportation Authority of Los Angeles, Red Line Dewatering System, Los Angeles, California.** Chief estimator for the engineer's estimate for permanent dewatering system, inclusive of site investigation, design, work plans, construction, and 5 years operation and maintenance. [\$4.1 million]

**Fairfax County, Noman Cole Pollution Control Plant Nutrient Reduction Program, Fairfax County, Virginia.** Chief estimator for this engineer's estimate for reclaimed water treatment plant, consisting of two pump stations and 15,500 feet of force main, in support of a reclaimed water feasibility study. [\$4.4 million]

**San Diego Unified Port District, Port of San Diego Redevelopment, San Diego, California.** Chief estimator for the Level 1 engineer's estimate for the redevelopment of a 100,000-square-foot mixed use facility. [\$83.527 million]

**Prince William County, PWC Road Bond Referendum, Prince William County, Virginia.** Chief and lead estimator for this task order under a service plan with PWC. Developed the engineer's estimate to establish construction budgets for roadway projects throughout Prince William County for the next 20 years. The estimates were developed in AECOM's TRACES software, a parametric estimating tool for transportation work. [\$238 million]

**Sydney Tar Ponds Agency, Sydney Tar Ponds, Sydney, Nova Scotia.** Chief estimator for this engineer's estimate for the remediation design, inclusive of the 30%, 60% 90%, and 100% design engineer's estimate, in addition to an incineration alternative remediation design. [\$130 million to \$172 million]

**Minergy and Milwaukee Metropolitan Sanitary District, Sludge-to-Glass Facility, Milwaukee, Wisconsin.** Chief estimator for this conceptual Level 1 engineer's estimate for a new sludge-to-glass facility, consisting of two 80-tpd incinerators and support systems. [\$65.4 million]

**US Army Corps of Engineers - Nashville District, Pistol Creek Ecosystem Restoration, Merryville, Tennessee.** Chief estimator for this engineer's estimate for the remediation design of a 4.5-mile reach of Pistol Creek. The estimates were developed using MCACES software, covering several remediation options ranging from \$4.1 million to \$9.2 million.

**Danieli Steel, Long Products Mini-mill, Houston, Texas.** Chief and lead estimator for the engineer's estimate for a mini-mill, consisting of steel process and a water treatment plant. [\$113 million to \$169 million]

**John A. Clark Co., Haymount Wastewater Treatment Facility, Caroline County, Virginia.** Chief estimator for this engineer's estimate for the design of a 1-mgd wastewater treatment facility inclusive of a 5-year operation period.

**Charter Steel, Rolling Mill Cut-To-Length, Cleveland, Ohio.** Chief and lead estimator for the Level 1 engineer's estimate for structure modifications, round bar feed stock process line, rolling equipment, cooling bar handling, bar diverter, stands, and kochs block. [\$117.9 million]

**US Air Force Center for Engineering and the Environment, Building 31 Seismic Upgrade, Los Angeles AFB, California.** Chief estimator for this \$555,000 design-build project to renovate existing building to meet current earthquake code requirements; performed as a task order under WERC.

**US Department of Agriculture, Hickey Run Stormwater Pollution Abatement, National Arboretum, Washington, District of Columbia.** Chief estimator for this stormwater pollution prevention plant consisting of CDS proprietary treatment process. [\$1.2 million]

**US Air Force Center for Engineering and the Environment, LASIK Eye**

**Clinic Renovation, Lackland AFB, Florida.** Chief estimator for the \$1.6 million design-build project for the 10,000-square-foot 1-story addition and renovation to an existing clinic; performed as a task order under DBP03.

**US Air Force Center for Engineering and the Environment, Medical Clinic Addition, Peterson AFB, Colorado.** Chief estimator for this \$556,000 design-build project for the 1,500-square-foot 1-story expansion of an existing clinic; performed as a task order under WERC.

**US Air Force Center for Engineering and the Environment, Retrofit AFB Hospital and Clinic, Tinker AFB, Oklahoma.** Chief estimator for this \$1.756 million design-build project to provide structural upgrades and renovations to existing 10,000-square-foot clinic; performed as a task order under WERC.

**US Air Force Center for Engineering and the Environment, Blast Windows Building 31, Los Angeles AFB, California.** Chief estimator for this \$357,000 design-build project to renovate existing building with new blast rated windows; performed as a task order under WERC.

**US Air Force Center for Engineering and the Environment, Blast Windows Building 33, Los Angeles AFB, California.** Chief estimator for this \$303,000 design-build project to renovate existing building with new blast rated windows; performed as a task order under WERC.

**US Air Force Center for Engineering and the Environment, Shosone Road Landfill Stabilization, Los Angeles AFB, California.** Chief estimator for this \$1.1 million firm fixed price project, which includes the design and mitigation of slope erosion and stabilization actions; performed as a task order under WERC.

**US Environmental Protection Agency, Hog Island Remediation, Superior, Wisconsin.** Chief estimator for this \$4.9 million task order under EPA ERRS 5 contract. This firm fixed price remediation includes the mechanical removal of 90,000 tons of lead contaminated soil/sediment within the tributary and inlet.

**Universal City Property Management, UCPM Remediation, Orlando, Florida.** Chief estimator for this \$7.2 million remediation project consisting of remediation, operation and maintenance, and long-term monitoring at eight sites. Remediation consisted of pump and treat systems, reductive dechlorination, and soil removal.

**US Air Force Center for Engineering and the Environment, Replace Boilers/Water Heaters, Los Angeles AFB, California.** Chief estimator for this \$4.97 million design-build replacement of boilers and water heaters in 12 buildings totaling 9.5 MBTU/hour capacity; performed as a task order under WERC.

**US Air Force Center for Engineering and the Environment, Plant 42 Air National Guard AVG Lights, Palmdale, California.** Chief estimator for this \$280,000 design-build taxiway-runway lighting modification project; performed as a task order under WERC.

**Charter Steel, Meltshop M2 Water Treatment Facility, Cleveland, Ohio.** Chief estimator for this \$7.2 million design-build meltshop water treatment facility.

**US Air Force Center for Engineering and the Environment, Building 37 Seismic Upgrade, Los Angeles AFB, California.** Chief estimator for this \$1.4 million design-build project to incorporate seismic improvements and upgrades to existing mechanical and structural systems; performed as a task order under WERC.

**City of Roswell, Big Creek Wetlands Enhancement, Roswell, Georgia.** Chief estimator for this \$2.5 million 26-acre wetlands restoration project, consisting of site balance, 3,550 feet of boardwalk, 7,200 feet of concrete trail, 3,100 feet of greenway trail, stormwater controls, in-stream diversion, and wetland plantings.

**US Air Force Center for Engineering and the Environment, Runway Joint Replacement, March ARB, California.** Chief estimator for this \$675,000 runway repair of runway joints. Includes the removal, routing, refacing, cleaning, and replacement of joint materials; performed as a task order under WERC.

**US Department of Energy, EMWF Cells 5 Expansion, Oak Ridge, Tennessee.** Chief estimator for this \$14.6 million design-build waste disposal cell, consisting of 500,000-cubic-yard TSCA, RCRA, and WAC landfill cell expansion. This project was developed and executed as a 50-50 LLC partnership.

**US Air Force Center for Engineering and the Environment, Air National Guard AVG Lights, Air Force Plant 42, California.** Chief estimator for this \$281,000 design-build improvements to airfield lighting systems at Runways 4-22 and 7-25; performed as a task order under WERC.

**Niagara Mohawk, Water Street Remediation and Site Development, Hudson, New York.** Chief estimator for this \$6.8 million former manufactured gas plant site involving remediation of 30,000 tons of contaminated soil and structural refurbishment of a historic warehouse.

**ITT Bell/Gossett, Guarantee Cleanup, Morton Grove, Illinois.** Chief estimator for this \$600,000 guarantee clean-up to receive NFA from regulatory, consisting of development of remedial action plan, remedial action (air sparging), and project specification development.

**US Air Force Center for Engineering and the Environment, Military Base Renovation, An Numaniyah, .** Chief estimator for this \$65 million rebuild Iraq contract to reconstruct and expand an existing Iraq military base, including water and wastewater treatment, utility services, Brigade Area 1, Division/Garrison Headquarters Area, Brigade Area 2, firing ranges, and support facilities, all consisting of 120 buildings.

**Chicago Transit Authority, Rail Stations, Chicago, Illinois.** Chief estimator for the 40%, 60%, 90%, and 100% engineer's estimates for the renovation and upgrade of light rail and four historical train stations.

**Virginia Department of Transportation, MMT Fire Main, Norfolk, Virginia.** Chief estimator for the engineer's estimate to replace 5,000 feet of 6-inch fire main, fire pump, and ancillaries for the fire protection system in the highway tunnel damaged in the flooding caused by Hurricane Irene.

**Rhode Island Department of Transportation, Woonsocket Depot Intermodal Transportation Facility, Woonsocket, Rhode Island.** Chief estimator for this engineer's estimate of historical architecture renovation/restoration.

**US Air Force Center for Engineering and the Environment, ENRAC-Remediation, Pope AFB, North Carolina.** Chief estimator for this \$1 million 6-acre soil and water remediation project.

**US Department of Energy, EMWF Cells 3 and 4 Expansion, Oak Ridge, Tennessee.** Chief estimator for this \$25.8 million design-build waste disposal cells, consisting of 800,000-cubic-yard TSCA, RCRA, and WAC landfill cell expansion, inclusive of project financing. This project was developed and executed as a 50-50 LLC partnership.

**US Army Corps of Engineers - Baltimore District, Replace Fire Alarm Systems at ARL Alarm Facility, Adelphi, Maryland.** Chief estimator for this \$1.76 million design-build task order to replace fire alarm systems in buildings 202, 204, and 205 at Army Research Laboratories.

**Statia Terminal Port, Port Hawkesbury, Statia, Nova Scotia.** Chief estimator for this design-build remediation of 60,000 tons of petroleum-contaminated soil, inclusive of tank containment and structure repairs.

**US Department of Energy, Environmental Management Waste Management Facility Expansion, Oak Ridge, Tennessee.** Chief estimator for this \$19 million, 800,000-cubic-yard design-build cell expansion inclusive of 30% to completion design. [WEDC (a Washington AECOM Disposal Cell, LLC)]

**Miami-Dade Department of Environmental Resources Management, Canal and Sediment Dewatering and Reuse Pilot, Miami, Florida.** Lead estimator for this 1-year \$2.5 million dewatering pilot plant to process up to 650,000 tons of sediment, complying with Florida DERM clean soil criteria to obtain sediment separation from dredge slurry for beneficial reuse. Treatment and reintroduction of supernatant.

**Florida Department of Transportation, Miami International Airport - Miami Intermodal Center-Car Rental Facility, MIC GMP#1, Miami, Florida.** Chief estimator for the engineer's estimate for this car rental facility foundation, pump station, and warehouse renovation project.

**Town of Bethlehem, Water Supply Augmentation, Bethlehem, New York.** Lead estimator for this design-build \$3.3 million 6-mgd raw water intake from the Hudson basin aquifer to the water treatment plant, which included six 24-inch by 18-inch double cased vertical wells and five 24-inch by 16-inch double-cased 25-degree angle wells (first of its kind in the US) with associated force mains, electric, and controls.

**US Air Force, Petroleum, Oil, and Lubricants Tank Repair, Soto Cano AFB, .** Chief estimator for this \$1.3 million project for the upgrades to four existing fuel tanks, including repairs and modifications of tank bottoms, installation of a new cathodic protection system, and a new radar based automatic tank gauging system.

**Frederick County Department of Public Works, Adamstown Pump Station, Frederick County, Maryland.** Chief estimator on a five-person estimating team in estimating and assembling this winning \$1.4 million bid for a 4.25-mgd municipal pump station with 19,260 feet of force main. The project included all associated corporate reports, bid bonds, cash flows, schedules, scope reviews, bid and risk analysis and final number determination. [Prior to AECOM]

**Spotsylvania County Department of Public Works, Motts Run Water Treatment Plant – Contract 1, Spotsylvania County, Virginia.** Chief estimator on a five-person estimating team in estimating and assembling the winning \$23.3 million bid for this 8-mgd municipal water treatment plant, including all associated corporate reports, bid bonds, cash flows, schedules, scope reviews, bid and risk analysis, and final number determination. [Prior to AECOM]

**City of Greensboro, T.Z. Osborne Wastewater Treatment Plant – Phase III, Greensboro, North Carolina.** Chief estimator leading a five-person estimating team in estimating and assembling this winning \$28.7 million bid for a 6.83-mgd municipal wastewater treatment plant, including all associated corporate reports, bid bonds, cash flows, schedules, scope reviews, bid and risk analysis, and final number determination. [Prior to AECOM]

**Baltimore Department of Public Works, Back River Wastewater Treatment Plant, Sludge Thickening Facility Expansion – Contract No. 736, Baltimore, Maryland.** Chief estimator leading a five-person estimating team in estimating and assembling the winning \$16.924 million bid for this sludge thickening facility, including all associated corporate reports, bid bonds, cash flows, schedules, scope reviews, bid and risk analysis, and final number determination. [Prior to AECOM]

**Baltimore County Department of Public Works, Fullerton Water Pump Station, Baltimore, Maryland.** Chief estimator leading a five-person estimating team in estimating and assembling this winning \$7.926 million bid for a 46-mgd municipal water pump station, including all associated corporate reports, bid bonds, cash flows, schedules, scope reviews, bid and risk analysis, and final number determination. [Prior to AECOM]

**US Navy - Chesapeake Division, Wastewater Treatment Plant, Quantico MCB, Virginia.** Chief estimator leading a five-person estimating team in estimating and assembling a winning \$9.848 million bid for a 2.42-mgd sanitary wastewater treatment plant to support Quantico's base personnel. Estimating activities included all associated corporate reports, bid bonds, cash flows, schedules, scope reviews, bid and risk analysis, and final number determination. [Prior to AECOM]

**District of Columbia Department of Public Works, Blue Plains**



**Wastewater Treatment Plant Additional Chemical Systems, Washington, District of Columbia.** Chief estimator leading a 5-person estimating team in estimating and assembling a winning \$44.5 million bid for chemical supply and induction systems for the existing wastewater treatment plant, including all associated corporate reports, bid bonds, cash flows, schedules, scope reviews, bid and risk analysis, and final number determination. [Prior to AECOM]

**City of High Point, East Side Wastewater Treatment Plant Incinerator Facility, High Point, North Carolina.** Chief estimator leading a 5-person estimating team in estimating and assembling the winning \$5.5 million bid for a fluid bed incinerator used to burn municipal sludge waste. Estimating activities included all associated corporate reports, bid bonds, cash flows, schedules, scope reviews, bid and risk analysis, and final number determination. [Prior to AECOM]

**Metropolitan Washington Airport Authority, Washington National Airport - New Boiler-Chiller Plant, Sandy Point, Virginia.** Chief estimator leading a 5-person estimating team in estimating and assembling this winning \$23.2 million bid for a 580-MBH/25,000-ton boiler/chiller plant for the new concourse of National Airport. Estimating activities included all associated corporate reports, bid bonds, cash flows, schedules, scope reviews, bid and risk analysis, and final number determination. [Prior to AECOM]

**City of Baltimore, Back River Wastewater Treatment Plant, Nitrification/Denitrification Facility Phase III, Baltimore, Maryland.** Chief estimator leading a 5-person estimating team in estimating and assembling a winning \$31.6 million bid for a 24-mgd nitrification/denitrification facility for this municipal WWTP. Estimating activities included all associated corporate reports, bid bonds, cash flows, schedules, scope reviews, bid and risk analysis, and final number determination. [Prior to AECOM]

**Hampton Roads Sanitary District, Nansemond Wastewater Treatment Plant Expansion Phase II, Suffolk, Virginia.** Lead estimator on a 5-person estimating team in estimating and assembling a winning \$47.9 million bid for the 26-mgd expansion to this primary and secondary treatment municipal WWTP. Estimating activities included all associated corporate reports, bid bonds, cash flows, schedules, scope reviews, bid and risk analysis, and final number determination. [Prior to AECOM]

**US Department of Agriculture, Beltsville Agriculture Research Center, West Wastewater Treatment Facility, Greenbelt, Maryland.** Lead estimator on a five-person estimating team in estimating and assembling the winning \$2.3 million bid for a new primary and secondary agricultural wastewater treatment facility. Estimating activities included all associated corporate reports, bid bonds, cash flows, schedules, scope reviews, bid and risk analysis, and final number determination. [Prior to AECOM]

**District of Columbia Department of Public Works, Blue Plains Wastewater Treatment Plant, Mix, Assemble, and Cure Facility, Washington, District of Columbia.** Project manager for this winning \$8.7 million bid for pumping, mixing modifications at the facility prepared by the estimating staff. Provided bid review and analysis. [Prior to AECOM]

**District of Columbia Department of Public Works, Blue Plains Wastewater Treatment Plant, Raw Water Pump Station No. 2 – Engine Replacement, Washington, District of Columbia.** Estimator for the mechanical portion (valued at \$2.6 million) of the winning \$3.2 million bid. Estimating activities included all subcontractor/vendor solicitation, analysis, and scope comparison. [Prior to AECOM]

**District of Columbia Department of Public Works, Blue Plains Wastewater Treatment Plant, Secondary Treatment Facility Improvements, Washington, District of Columbia.** Project manager for the winning \$15.4 million bid for modifications/improvements to the secondary aeration system and tanks at the plant. Provided bid review and analysis. [Prior to AECOM]

**District of Columbia Department of Public Works, Blue Plains Wastewater Treatment Plant, Effluent Aeration Channels and Filter Influent Pumps Improvements, Washington, District of Columbia.** Project manager for the winning \$5.7 million bid for secondary treatment aeration basin rework prepared by the estimating staff. Provided bid review and analysis. [Prior to AECOM]

**Granite Management Corporation, Tourtelot Ordnance Explosive Remediation, Benicia, California.** Chief estimator for this \$8.6 million unexploded ordnance remediation project, including development of the OE site conceptual model, OE point clearance, surface clearance, intrusive investigation, TNT-contaminated soil remediation, and geographical surveying.

**US Steel, Gary Works Facility, Grand Calumet River Remediation, Gary, Indiana.** Lead estimator for this \$36 million proposal including the design and construction of a 36-acre 2-cell RCRA/TSCA landfill with leachate collection and detection systems, design and construction of one chemically assisted clarification treatment system, and one project-specific treatment plant, and hydraulic dredging of five miles (750,000 cubic yards) of the Grand Calumet River. Temporary by-pass pumping of 101-mgd plant outfall.

**Commonwealth Edison, Project Controls Services, Chicago, Illinois.** Provided estimating for a proposal to provide project controls services in support of ComEd's \$1.5 billion construction and maintenance program, including a discovery phase, development phase, and implementation phase. Generated and implemented project controls systems and services consisting of estimating, scheduling, cost control, administrative, and a web-based support system.

**US Army Corps of Engineers, Petroleum, Oil, and Lubricants Facility, Hunter Army Airfield, Georgia.** Lead estimator of a 5-person estimating and management team in estimating and assembling the winning negotiated \$4.9 million bid for this Type III fueling hydrant, including all associated bulk storage tanks, filter systems, distribution system, and fueling hydrants.

**Tyco Telecommunications, Mediterranean Projects, .** Lead estimator for the estimate and schedule for nine design-build fiber optic cable stations,

including siting, permitting, fiber optic cable ductbank, and cable station.  
The \$120 million project is a turnkey project from greenfield to completion.

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**Tyco Telecommunications, Cable Station, Boca Raton, Florida.**

Provided engineer's estimate for the fiber optic ocean beachfront approach, including 11,600 linear feet of horizontal directional drilling (HDD), 28,000 feet of open-trench, and HDD ductbank.

**Various Clients, Various Projects, , Ohio.** Field engineer and quality control manager responsible for panel layout, construction supervision, quality control, productivity study, and field installation for prefabricated masonry panels. [Prior to AECOM]

**Washington Suburban Sanitary Commission, Hyattsville Wastewater Pumping Station, Hyattsville, Maryland.** Project manager for an \$8.8 million pump station with all associated pipelines, including pay requests, schedule updates with narratives, requests for information (RFIs), change orders, shop drawing reviews, and submittals, and coordination of the supervision, work force, construction equipment, suppliers, and

subcontractors. This 60-mgd pump station was constructed on a P-1 soil fault along the Potomac River with 60-foot-deep construction of the pump station parallel to existing, operational railroad tracks. The H-pile and lagging shoring system required the approval of adjacent property owners and railroad approval for the tieback system, which encroached onto their property. Used a Krings (slide rail) trench shoring system for the 22-foot-deep road crossings, thereby eliminating the need to shut down the entire road and a costly temporary road. [Prior to AECOM]

**City of Havre De Grace, Water Treatment Plant, Havre De Grace, Maryland.** Supervised and performed punch out for completion of a \$5 million, 3-mgd water treatment plant. Directed project engineers, work crews, and subcontractors completing the construction of the WTP, including installation of chemical feed systems, raw water intake, and process piping. [Prior to AECOM]

**Washington Suburban Sanitary Commission, Sludge Composting Facility Quality Assurance/Quality Control, Silver Spring, Maryland.** Project engineer for construction of this \$7 million sludge composting facility, which consisted of 200,000 square feet of covered drying beds and compost screens. Supervised and performed punch-out. Supervised crews and subcontractors, and reviewed process equipment contracts, submittals, change orders, and requests for information. [Prior to AECOM]

**Fort AP Hill, Secondary Facility, Fort A.P. Hill, Virginia.** Superintendent, quality control, and project engineer for the management and supervision of a sitewide telemetry system and maintenance facility, including building completion, punch out, and site restoration. Provided troubleshooting for problem areas. Reviewed and evaluated process equipment and materials for compliance with the contract documents. [Prior to AECOM, \$4.5 million]

**District of Columbia Department of Public Works, Sludge Degritting Facility, Washington, District of Columbia.** Start-up superintendent for degritting equipment/process. Provided plant operator training and vendor service time, and assembled, reviewed, and submitted the operations and maintenance manual. Coordinated the plant process tie-in and bringing the new facility on line with the owner's plant operators. [Prior to AECOM, \$8.2 million]

**Queen Anne's County Department of Public Works, Kent Narrows Wastewater Treatment Plant, Stevensville, Maryland.** Project manager for construction of a \$5.8 million expansion with all associated yard piping. Scheduled and coordinated the supervision, work force, construction equipment, suppliers, and subcontractors. The 2-mgd expansion required strong communication and coordination with the engineer and owner to construct the new facility without interrupting the existing plant operations. Proposed a plantwide system bypass, which enabled the new facility to be brought on line without a costly plant shutdown or plant bypass. [Prior to AECOM]

**City of Key West, Wastewater Treatment Plant, Key West, Florida.** Project engineer and assistant project manager for \$29 million construction. Managed and supervised all mechanical work for two 30-inch-diameter polyethylene force mains at 6,000 feet each across the island of Key West,

and construction of a 28-mgd WWTP, consisting of preliminary treatment, aeration basins, filter building, solids processes, and secondary treatment. Supervised a mechanical superintendent, two project engineers, six foremen, and a work force of 60 millwrights and pipefitters. [Prior to AECOM]

**City of Fayetteville, Sludge Management Systems, Fayetteville, Arkansas.** Project manager for a \$3.6 million project consisting of a 640-acre sludge farm to be completed within 180 days. The project incorporated secondary effluent treatment and sludge distribution throughout the site. The tight construction schedule, which proceeded through the wet season, required close coordination with the engineer to ensure successful completion within the allotted duration. [Prior to AECOM]

**Denver Airport Authority, Stapleton International Airport - Concourse A Expansion, Denver, Colorado.** Project engineer for a fast-track, \$4.9 million project to be performed through the Colorado winter in 120 days. Duties included close coordination with the owner, submittals, subcontractor coordination, change orders, as-built drawings, operation and maintenance manuals, scheduling, material takeoffs, and pricing. [Prior to AECOM]

**City of Jacksonville, Wastewater Treatment Plant, Jacksonville, Arkansas.** Project engineer and area superintendent responsible for field layout of 32 structures on a 650-acre construction site, including 15,000 feet of yard piping from 2 to 60 inches in diameter. Supervised excavations and rodman crews, and two 5-man mechanical crews for the installation of three open screw pumps, headworks, three aeration basins with associated equipment, intermediate pump station, contact tanks, filter building, three 80-foot-diameter clarifiers, DAF equipment, and sludge thickener. [Prior to AECOM, \$8.4 million]

**Commercial Development Company, Denver West Office Complex, Denver, Colorado.** Project engineer supporting \$2.5 million in miscellaneous projects including punch-out of building 26, and miscellaneous office park upgrades/repairs. Supervised work forces, proposals, submittals, negotiations, and pay applications. [Prior to AECOM]

**Denver Water Authority, Highlands Water Pump Station, Denver, Colorado.** Project engineer and assistant superintendent responsible for field layout of structures, pipelines, and roadways, and supervision of yard piping installation, including 12,000 feet of underground piping ranging in size from 0.5 to 96 inches in diameter, consisting of PVC, ductile iron pipe, and wrapped cement-lined steel pipe. Also supervised installation of 12 horizontal centrifugal pumps up to 1,250 hp, associated flanged piping and valves, and three 13,500-cubic-foot surge tanks. This project was valued at \$2.6 million. [Prior to AECOM]

**Denver Rio-Grande Railroad, Moffitt Tunnel Fan Rehabilitation, Rollinsville, Colorado.** Project engineer and superintendent for fan rehabilitation. Supervised millwrights in the installation and alignment of two portal gate systems, in addition to the documentation of as-built drawings, for this \$6.6 million project. [Prior to AECOM]

**Years of Experience**

AECOM: 6+ Years

**Education**

MS, Environmental  
Engineering, 2007,  
Florida International  
University,  
Miami, USA

BS, Civil Engineering, 2005,  
MVSR Engineering College,  
Osmania University,  
Hyderabad, India

**Training and Certificates**

HAZWOPER 40-Hour  
AECOM EHS Auditor Training

**Overview**

Gayatri has over six years of engineering consulting experience working on civil and environmental projects, specializing in environmental remediation. Her experience includes environmental compliance, Phase 1 Environmental Site Assessments, data analysis, feasibility studies, fate and transport modeling, risk assessments and design and performance assessment of soil and groundwater remedial systems. Gayatri has assisted on various phases of environmental projects including direct correspondence with the subcontractor, client and the regulatory agency. Gayatri has been responsible for preparing the Stormwater Pollution Prevention Plans (SWPPPs) and putting together the design drawings and specifications. Gayatri also assisted in field work (soil and groundwater sampling), Construction Phase Services (CPS), Environment, health and safety (EHS) audits, design of water and wastewater treatment facilities, transmission mains and pipelines.

Gayatri is familiar with various analytical and software models such as EPA ProUCL Software, EPA Water 9, RBCA Tool Kit for Chemical Releases and Seview Integrated Contaminant Transport and Fate Modeling System.

**Experience****Class I Railroad Projects**

Served as staff engineer for design of Wastewater Treatment Plant Modifications and provided Construction Phase Services for a project in Texas. Assisted in managing various impacted sites including regulatory agency correspondence. Conducted groundwater and soil sampling activities for delineation of impacted material. Assisted in preparing sampling plans. Evaluated the sampling data and performed 95% Upper Confidence Limit (UCL) calculations using ProUCL software. Calculated site specific Tier II Protective Concentration Levels (PCLs) using RBCA Tool Kit. Prepared design drawings and specifications for remediation of the impacted media. Prepared SWPPPs and maintained field forms. Currently assisting as project engineer in evaluating the data and preparing performance assessment report for a pump and treat system and preparing Discharge Monitoring Reports (DMRs) for a project in Texas.

**Major Oil and Gas Company Projects**

Assisted in Permit to Use State Land Renewal for sites consisting of groundwater remediation systems in Michigan. Directly responsible for maintaining the operation, monitoring and maintenance forms and uploading the forms onto the client's SharePoint site. Currently working as project engineer in evaluating the data and preparing performance assessment reports. Prepared and submitted Coastal Use Permits for decommissioning projects in Louisiana. Prepared SWPPP for a decommissioning project in Tennessee.

**Environmental Compliance Assessment**

Assisted in updating the Industrial Wastewater Permit Application for a chemical plant in Texas. Obtained files from the Texas Commission on Environmental Quality (TCEQ) Central Registry, reviewed the TCEQ public water system regulations and assisted in completing the audit.

**Phase I Environmental Assessments**

Performed Phase I Assessments for various clients in accordance with ASTM Standard Practice Designation E 1527-13 and prepared reports. The Phase I ESA included a site visit, regulatory research, historical review, and a review and an environmental database analysis of the subject property. Reviewed records of SWPPPs and Spill Prevention Control and Countermeasures (SPCC) inspections for the facilities.

**WTP 4 – Water Treatment Plant 4, Austin, Texas**

Served as Graduate Engineer for the final design of the Water Treatment Plant No. 4 which includes storm water facilities, the raw water delivery system, the treatment plant facilities, and the finished water distribution facilities. Tasks include: developed SWPPPs for various contracts for specific phases of the project, maintained electronic copy of specifications for all the contracts for specific phases of the project, assisted in design drawings, prepared valve schedule, cost estimate and updated technical memorandums.

**BPUB SSO – VICC Wastewater collection and Rehabilitation, Brownsville, Texas**

Served as Graduate Engineer for the preliminary and final design and reconstruction of approximately 43, 600 linear feet of gravity sanitary sewer line. The project also includes one existing lift station structure, as well as the design and construction of eight new lift station structures. Tasks include: Lift station emergency storage calculations, gravity sanitary sewer line alignment, design drawings and field visit.



**Gregory Sampson**  
**Vice President**

[ gsampson@vertexeng.com / 781-952-6087 ]

**Expertise:**

Asbestos  
Indoor Air Quality  
Mold  
Environmental Portfolio  
Reviews  
Phase I ESAs  
Environmental Health & Safety  
Groundwater & Soil Characterization  
Hazardous Materials/Waste  
Litigation Support & Expert Testimony (Environmental)  
PCB  
Remedial Design & Feasibility Studies  
Remediation & Construction Management  
Site Characterization

**Education/Training:**

B.S., Energy and Environmental Resource Management, Bridgewater State University, Massachusetts

**Biography:**

Mr. Sampson is Vice President of Facility Closure at VERTEX and responsible for industrial market sector growth and management in this service area. Mr. Sampson manages multi-million dollar remediation, abatement and demolition projects throughout North America. He is responsible for expanding decommissioning and demolition services, growing revenue for existing clients and developing new opportunities.

Mr. Sampson has over 16 years of experience in the environmental consulting field and has provided reliable/actionable input and advice to clients and account teams on a wide-range of global due diligence, remedial construction, decommissioning and demolition projects. He has actively participated in short and long range planning and assisted with the definition, coordination and implementation of client capture strategies, setting priorities and setting programmatic objectives. Mr. Sampson has a proven track record of developing practical and economical solutions to specific problems encountered by complex pursuits and projects.

**Relevant Experience:**

**[DECONTAMINATION AND DEMOLITION PLANS]** *Explosives Manufacturing Plant Demolition, Charlestown, Indiana*

Developed decontamination and demolition plans for the dismantling of a retiring explosives plant for a large manufacturing client. The plant was to be dismantled in stages in order for the client to continue the manufacturing process for as long as possible requiring surgical dismantling and stringent health and safety requirements to protect adjacent workers as well as lock out/tag out procedures.

Additional execution requirements were needed to render the explosive residue inert during the demolition process. AECOM performed full-time construction management oversight throughout the project.

**[DEMOLITION]** *Former Lube Plant, Petroleum Client, Knoxville, TN*

Managed a comprehensive asbestos and regulated materials survey and the development of complete demolition, abatement and hazardous materials management and disposal plan. Developed a cost estimate summary for abatement and demolition activities. Managed the development of bid documents and contractor selection for the project.

Will manage construction phase services during the abatement and demolition project, including attendance at weekly job meetings, review of contractor submittals, review of hazardous waste manifests, and overall management of demolition and abatement subcontractors for the Owner.

**[DEMOLITION]** *Multi-Site Demolition Program, Massachusetts (Statewide)*

Managed comprehensive demolition surveys of 25 toll booths and associated





support buildings in order for the state to implement an E-tolling system. Surveys consisted of asbestos, regulated materials, lead based-paint, and petroleum contamination located throughout each multiple building Site. Coordinated the mobilization of survey crews from multiple locations to perform the work in accordance with the client's fast track schedule. Developed survey reports with detailed material location tables and figures that could be utilized in the bid specifications. Developed demolition and hazardous materials abatement bid specifications for the State to solicit qualified bids.

**[DEMOLITION]** *Former Lube Plant, Bayonne, NJ*

Managed a comprehensive asbestos and regulated materials survey and the development of complete demolition, abatement and hazardous materials management and disposal plan. Developed a cost estimate summary for abatement and demolition activities. Assisted in the development of bid documents and contractor selection for the project. Negotiated as lead with State and Federal regulators relating to abatement and demolition methods to provide a safer working environment for workers. Developed alternative means and methods for tank insulation abatement to save time and money for the Client, negotiated with the EPA to provide approval for proposed methods.

**[REMEDATION AND REGULATORY CLOSURE ]** *Former Jiffy Lube, Fern Park, FL*

Mr. Sampson managed the remediation and regulatory closure at the former Jiffy Lube for the construction of a new restaurant. The Phase II assessment identified gasoline contamination in the area of the former gasoline underground storage tanks; therefore, the remediation was conducted as a Source Removal under Rule 62-770.300 FAC. A Project Plan was submitted to the Orange County Environmental Protection Division (OCEPD) and the Florida Department of Environmental Protection (FLDEP) outlining the proposed excavation activities, monitor well abandonments/installations and groundwater sampling events. The approved plan included the removal of the oil water separator, the excavation and disposal of approximately 150 tons of petroleum contaminated soil, well abandonment and site restoration. A remediation closure report was submitted to the OCEPD and FLDEP for review and closure of the spill was granted.

**[DEMOLITION AND REMEDIATION]** *Petroleum Client, Multi-Site Demolition and Remediation Program, United States*

Managed comprehensive demolition surveys of five former terminals, two former lube plants, and one former refinery for a large petroleum client. Surveys consisted of asbestos, regulated materials, lead based-paint, and petroleum contamination located throughout each multiple building Site. Coordinated the mobilization of survey crews from multiple locations to perform the work in accordance with the client's fast track schedule. Developed survey reports with detailed material location tables and figures that could be utilized in the bid specifications. Developed demolition and hazardous materials abatement bid specifications and managed the bidding process, including pre-qualification and selection of contractors. Provided construction management oversight throughout the demolition projects to ensure compliance with strict safety requirements (LPS) and project specifications.

**[DEMOLITION PLANNING AND EXECUTION]** *Pier, Bar Harbor, Maine*

Developed sampling plans and demolition planning for the dismantling of a car bridge and pier at a passenger terminal in Bar Harbor, Maine. Managed the demolition project as the general contractor for the project which required

special health and safety controls related to working over water and alternative plans for emergency response. Managed all subcontractors through completion of the project and wastes/recycling streams to increase scrap credit for owner. Project completed on-time and budget.

**[DEMOLITION]** *EPA Consent Site Demolition Program, Puma Energy, Bayamon, Puerto Rico*

Developed sampling plans, specifications and USEPA Region 2 required work plans for the demolition of the former CAPECO refinery in Bayamon, Puerto Rico. The refinery was damaged by explosions resulting in a fire at the Facility that largely destroyed approximately 17 tanks on the Facility, and damaged surrounding tanks and other Facility's infrastructure, including the fuel transfer pipeline. In October 2009, it affected the terminal, damaging or destroying about half of the tanks at the terminal. Immediately following the October 2009 explosions and fires, third party emergency response contractors provided emergency cleanup and assistance at the terminal. The EPA issued a Unilateral Administrative Order pursuant to the Oil Pollution Act ("OPA") and the Clean Water Act ("CWA"), directing CPR to commence cleanup and removal actions at the terminal.

**[DECOMMISSIONING AND DEMOLITION PLANNING]** *Power Plant, Syracuse, New York*

Managed a comprehensive hazardous materials and asbestos inventory addressing all buildings, facilities and operations at a coal-fired power plant and developed a detailed cost estimate and risk register. The cost estimate identified costs associated with each element of the decommissioning and demolition of the power plant. Prepared a compliance matrix that identified all compliance issues that would need to be addressed if the power plant was closed, decommissioned and demolished. AECOM used the hazardous materials and asbestos inventory to estimate the cost of the abatement work that would precede the demolition activities. AECOM also estimated the quantity of scrap metal and identified the value of saleable items in the power plant including transformers, generators and other items.

**[DECOMMISSIONING AND DEMOLITION PLANNING]** *Former Refinery, Batangas, Philippines*

Managed a Hazardous and Regulated Materials investigation and asset inventory of a refinery operation in Batangas Philippines. The work involved leading a team of up to 20 staff and subcontractors to review oil company records and drawings to define the process engineering for former refinery operation, bulk storage; wastewater treatment and island wharf crude oil delivery system. The team inspected and inventoried all assets being planned for decommissioning and demolition. The team additionally performed a detailed hazardous and regulated materials inspection and catalogued all data in site specific spreadsheets with roll up functions to make the planning and cost estimating process, schedule estimate, and work plan able to be bid out by multiple vendors on apples to apples basis. The final report lists the customer desired strategy, schedule expectations, methods and means expectations and health and safety expectations and a detailed engineering cost estimate for reserve estimating and for a basis for bid comparison.

**[DECOMMISSIONING AND DEMOLITION PLAN]** *Coca Cola, Rio De Janeiro, Brazil*

Development of a comprehensive decommissioning and demolition plan of a former textile mill for re-development into a manufacturing plant of RJR Soft Drinks. The plan accounted for all decommissioning and demolition activities as

well as a number of other project wrap-around issues such as stormwater management and site reconfiguration. The demolition plan addressed a specific set of tasks and was developed to contain the appropriate level-of-effort, staffing and equipment to complete each task of the project. Completed detailed site inspections and reviewed facility construction drawings to estimate scrap steel quantities and to quantify re-use of on-site concrete during the construction project.

**[DEMOLITION]** *Rail Terminal Demolition, Ferndale, Michigan*

Developed sampling plans, specifications and bid documents for the demolition of structures at a major railroad terminal in Ferndale, Michigan. Managed the demolition and hazardous materials abatement bid specifications and identified an alternative approach that saved the client over 6 weeks of schedule time. Additionally, he managed the bidding process, including pre-qualification and selection of contractors. Provided construction management oversight throughout the demolition project to ensure compliance with strict safety requirements and project specifications.

**[DEMOLITION, TANK REMOVAL, REMEDIATION]** *Former Chevron Station, Miami, FL*

Managed the closure and demolition of a former Chevron gas station to allow for redevelopment. Performed hazardous materials assessment of structure and soils at the site. The structure was demolished and the tanks were removed in accordance with Florida Department of Environmental Protection and Broward County protocols. Project included the removal of over 150 tons of petroleum contaminated soil and restoration of the property.



## Carl Holiday

*Senior Associate / Structural Project Manager / Cost Estimator*

Since 1985, Carl Holiday has worked in engineering, architecture, and urban design firms. His work has involved design, construction administration, cost estimating and project management. Most of the projects on which he has worked have involved close coordination, cooperation, and solicitation of design input from contractors and manufacturers. Mr. Holiday's experience also includes the master planning of multi-building institutional campuses for state and local governments.

### Education

B.S., Architectural Engineering, The University of Texas at Austin, 1987

M.S., Architecture, The University of Texas at Austin, 1997

### Professional Affiliations

American Institute of Steel Construction (AISC)

### Contact

8500 Bluffstone Cove, Ste. B-103  
Austin, Texas 78759  
512.338.1101

[www.encotechengineering.com](http://www.encotechengineering.com)

*\*Prior Experience*

### Civic

- Austin Fire Station Driveway Repairs — Austin, Texas
- Austin Fire Department Renovations OPC (Stations 14, 19, 20, 21, & 23) — Austin, Texas
- Austin Convention Center Solar Photovoltaic Panel Installation — Austin, Texas
- Austin Energy (AE), Regulatory Consulting Services — Austin, Texas
- Parmer Event Parking Feasibility Study — Austin, Texas
- Travis County Correctional Complex — Austin, Texas

### Infrastructure

- ABIA Cooling Tower Repairs — Austin, Texas
- ACWP Town Lake / E. Riverside Foundation Analysis — Austin, Texas
- Austin Energy Jette Substation Control House Retrofit — Austin, Texas
- Brazos River Authority SWATS Tank Repair — Keene, Texas
- Brazos River Authority SWATS Tank Foundation Repair — Keene, Texas
- COA Reclaimed Water System Improvements, Main-Junction 420— Austin, Texas
- Davis Water Treatment Plant (WTP) Flocculator Improvements — Austin, Texas
- Davis Water Treatment Plant Sludge Processing Improvements — Austin, Texas
- Davis WTP & South Austin Regional WTP Facility Assessment — Austin, Texas
- Downtown Tunnel — Austin, Texas
- Downtown Tunnel Seaholm Addition — Austin, Texas
- Holly Power Plant Decommissioning — Austin, Texas
- Hornsby Bend Biosolids Management Plant Master Plan — Austin, Texas
- Little Walnut Creek Flood Hazard Reduction, from Metric to Rutland — Austin, Texas
- Parmer Lane Interceptor Sewer Tunnel Access Shafts — Austin, Texas
- Pilot Knob Pump Station — Austin, Texas
- Plaza Saltillo Phase II Water Line Replacement — Austin, Texas
- Northwest park Dam Phase II — Austin, Texas
- Onion Creek Williamson Tributary — Austin, Texas
- Onion Creek Tunnel Interceptor — Austin, Texas
- Ridgelea Stormwater Improvements — Austin, Texas
- Robindale Wastewater Treatment Plant — Brownsville, Texas
- Rosedale Stormwater Improvements — Austin, Texas
- Sand Hill Energy Center Platform Framing — Austin, Texas
- Sand Hill Energy Center Maintenance Support Building 2 — Austin, Texas
- Sand Hill Energy Center 100MW Expansion — Austin, Texas
- Sand Hill Energy Center Ancillary Foundation — Austin, Texas
- SAWS Western B Extension — San Antonio, Texas
- Seaholm District Wastewater Interceptor — Austin, Texas
- Seaholm District Wastewater Interceptor — Austin, Texas

- Town Lake Center Parking Garage — Austin, Texas
- Waller Creek Tunnel — Austin, Texas
- Waller Creek Tunnel 9th Street Bridge Abutment Wastewater Line — Austin, Texas
- Waller Creek Tunnel Material Testing & Tunnel Survey — Austin, Texas
- Walnut Creek WWTP Secondary Improvements — Austin, Texas

#### **Transportation**

- ABIA CONRAC Phase QA/QC — Austin, Texas
- ABIA New Parking Lot — Austin, Texas
- ABIA Propane Facility — Austin, Texas
- ABIA Remain Over Night Apron Expansion — Austin, Texas
- ABIA Terminal Improvements — Austin, Texas
- ABIA Trash Compactor Relocation — Austin, Texas
- ABIA Wall Stabilization and Embankment Expansion — Austin, Texas
- CAP METRO Bay Area 6 — Austin, Texas
- CAP METRO Monument Signs for Commuter Rail Stations — Austin, Texas
- COA Austin to Manor Trail Phase II — Austin, Texas
- Loop 360 Bike Lanes — Austin, Texas
- Travis County Blake Manor Road Improvements — Austin, Texas
- URBAN Rail Alternatives Analysis — Austin, Texas
- Utility Relocation at I-35 & Yager — Austin, Texas



## Sharon S. Bickford, PE

*Principal / Senior Electrical Project Manager*

Sharon Bickford, PE has been involved in a multitude of local projects in Austin and Central Texas as an electrical engineer and project manager for more than 20 years. She has extensive experience as a consulting engineer, project manager, facilities engineer, and power systems engineer. As a former electrical engineer for Austin Energy and the University of Texas at Austin, she has managed, designed, and reviewed projects for the City of Austin, as well as other state and local departments. She has been instrumental in providing electrical and illumination design throughout her career.

### Education

B.S., Architectural Engineering,  
Kansas State University, 1985

### Certification

Registered Professional Engineer  
Texas #77390

Construction Documents  
Technologist (CDT) — Construction  
Specification Institute

### Professional Affiliations

Illumination Engineering Society  
(IES), Past President

### Contact

8500 Bluffstone Cove, Ste. B-103  
Austin, Texas 78759  
512.338.1101

[www.encotechengineering.com](http://www.encotechengineering.com)

*\*Prior Experience*

### Civic

- Austin Energy Building Town Lake Center Renovations — Austin, Texas
- Austin Energy Regulatory Consulting Services — Austin, Texas
- Austin–Bergstrom International Airport (ABIA) Consolidated Rental Car Facility — Austin, Texas
- ABIA Campus HVAC Improvements QC — Austin, Texas
- ABIA - Information Kiosks — Austin, Texas
- Brazos River Authority Central Office HVAC Replacement Peer Review — Waco, Texas
- Capital Metro Travis Building Renovation — Austin, Texas
- City of Austin (COA) Austin Convention Center Southside ADA Sidewalk Renovations — Austin, Texas
- COA Austin Fire Department Women's Locker Room Additions Phase V — Austin, Texas
- COA Austin Police Department Mounted Patrol Facilities — Austin, Texas
- COA Combined Transportation, Emergency and Communications Center (CTECC) — Austin, Texas
- COA CTECC Breezeway Office Addition — Austin, Texas
- COA Dougherty Arts Center Life Safety Improvements — Austin, Texas\*
- COA Dynamic Parking System — Austin, Texas
- COA Emergency Medical Services (EMS) Vehicle Bay Expansions — Austin, Texas
- COA Glen Bell Service Center Study — Austin, Texas
- COA IH-35 Underpass Lighting — Austin, Texas
- COA New Central Library — Austin, Texas
- COA Oakwood Cemetery, Chapel Restoration — Austin, Texas
- COA Palmer Events Center Electrical Circuit Installation — Austin, Texas
- COA Palmer Events Center Security Upgrades for 2nd & 5th Street Garages — Austin, Texas
- COA Palmer Events Center Water Meter Replacement — Austin, Texas
- COA Palmer Events Center Power Factor Upgrade — Austin, Texas
- COA PARD Walsh Boat Landing — Austin, Texas
- COA Public Library New Central Branch — Austin, Texas
- COA RBJ Building Modernization to Service and Passenger Elevators — Austin, Texas\*
- COA Republic Square Park — Austin, Texas
- COA Shaw Lane/Pleasant Valley Drill Field & Tower Repairs/Renovations — Austin, Texas
- COA Town Lake Center (TLC) Solar Feasibility & Electrical Investigation — Austin, Texas
- COA Will Hampton Library Renovation — Austin, Texas
- COA Zilker Metro Park Trailhead Restrooms — Austin, Texas



- Episcopal Church of the Good Shepherd on the Hill — Austin, Texas
- Mt. Zion Baptist Church Addition — Austin, Texas
- Pflugerville Library Maker Space/Classroom — Pflugerville, Texas
- Texas Adjutant General MATES Lighting Renovating — North Fort Hood, Texas
- Texas Facilities Commission Brown Heatly Building & William P. Hobby Building Towers I, II & III — Austin, Texas
- Texas Facilities Commission Central Services Building Controls — Austin, Texas
- Texas Facilities Commission John H. Winter Building — Austin, Texas
- Texas Facilities Commission Dept. of Health Parking Lot, 49th Street — Austin, Texas
- The Salvation Army (TSA) Corps Worship Center — Austin, Texas
- Travis County Correctional Complex Water Softeners Design Buildings 130, 106 & 110 — Austin, Texas
- Travis County Starflight Hangar Expansion Phase II — Austin, Texas

### Infrastructure

- ABIA Stormwater Drainage Improvements — Austin, Texas
- COA AWU Pressure Point & Lookout Pump Station Improvements — Austin, Texas
- COA AWU Pressure Point Station Improvements Potable Water System — Austin, Texas
- COA Bowie Underpass — Austin, Texas
- COA Davis Lane Cooling Towers — Austin, Texas
- COA Davis Water Treatment Plant Power Distribution Upgrade — Austin, Texas
- COA Domain Chiller Facility — Austin, Texas
- COA Dynamic Parking System — Austin, Texas
- COA Lamar Beach Feasibility Study — Austin, Texas
- COA North Austin Reservoir & Pump Station — Austin, Texas
- COA Seaholm Electrical Substation Wall — Austin, Texas
- COA Shaw Lane Drill Field & Tower Repair / Renovation — Austin, Texas
- COA Town Lake Center (TLC) Electrical Assessment — Austin, Texas
- COA Walnut Creek WWTP Stormwater Improvements — Austin, Texas
- Colony Park Sustainable Community Initiative — Austin, Texas
- Meridiana Parkway & Open Spaces — Iowa Colony, Texas
- Presidential Heights Lift Station — Manor, TX
- San Antonio Water System Brackish Groundwater Desalinization — San Antonio, Texas
- Seaholm Electrical Substation Wall — Austin, Texas
- Travis County Correctional Complex Building 130 Domestic Boiler Replacement — Austin, Texas
- University Hills Branch Library Parking Lot Expansion — Austin, Texas
- Woodhull Development Offsite Wastewater Improvement Lift Station — Georgetown, Texas

### Transportation

- Austin Bergstrom International Airport (ABIA) Apron Expansion — Austin, Texas
- ABIA Austin Landside Improvements Bus Shelter — Austin, Texas
- ABIA Consolidated Rental Car Facility — Austin, Texas
- ABIA Building 8220 Maintenance Facility Renovations — Austin, Texas
- ABIA Motor Pool Improvements Study — Austin, Texas
- ABIA Moving Walkway Feasibility Study — Austin, Texas

- ABIA New Consolidated Maintenance Facility — Austin, Texas
- ABIA IS Building 7355 — Austin, Texas
- ABIA Parking Garage Elevator Improvements — Austin, Texas
- ABIA Parking Operation Improvements: VIP/Valet Parking — Austin, Texas
- ABIA Temporary Walkway — Austin, Texas
- ABIA Terminal Expansion — Austin, Texas
- ABIA Trash Compactor Installation — Austin, Texas\*
- ABIA Secured Exit Lanes — Austin, Texas
- ABIA Wall Stabilization & Embankment Expansion — Austin, Texas
- Capital Metro Travis Building — Austin, Texas
- COA Bowie Street Underpass — Austin, Texas
- COA IH-35 Underpass Lighting — Austin, Texas
- COA Mopac Bicycle and Pedestrian Bridge over Barton Creek — Austin, Texas
- COA Mopac Bicycle Bridge: Loop 360 Crossing — Austin, Texas
- COA Rio Grande St. Reconstruction & Utility Adjust.: 24th to 29th — Austin, Texas
- COA West 2nd Street Bridge — Austin, Texas
- Delta Air Lines Customer Service — Austin, Texas
- Riata Vista Parking Garages — Austin, Texas





## Rachel Maldonado, PE

### Senior Associate / Structural Project Manager

Rachel Maldonado has a wide range of structural engineering experience with both private and public projects including healthcare and assisted living facilities, retail, office buildings, governmental and educational institutions. She has worked in close coordination with multiple parties, including architects, contractors and manufacturers, to ensure design and construction administration project phases are completed on time and within budget.

#### Education

B.S., Architectural Engineering, The University of Texas at Austin, 2007

#### Certification

Licensed Professional Engineer  
Texas #117500

Licensed Professional Engineer  
Colorado #0049326

Licensed Professional Engineer  
Louisiana #0040137

#### Professional Affiliations

American Institute of Steel  
Construction (AISC)

#### Contact

8500 Bluffstone Cove, Ste. B-103  
Austin, Texas 78759  
512.338.1101

[www.encotechengineering.com](http://www.encotechengineering.com)

*\*Prior Experience*

#### Civic

- Austin Energy (AE) Regulatory Consulting Services — Austin, Texas
- Austin Fire Department Station Driveway Repairs — Austin, Texas
- City of Austin Operations & Maintenance Manual — Austin, Texas
- First United Methodist Church — Temple, Texas
- Hillcrest Baptist Church Renovations — Austin, Texas
- Mt. Zion Baptist Church Addition — Austin, Texas
- Palmer Event Center Parking Garage Study — Austin, Texas
- Town Lake Center Parking Garage Assessment — Austin, Texas

#### Infrastructure

- COA AISD Mains to Capitol Complex — Austin, Texas
- COA Little Walnut Creek Flood Hazard Reduction, from Metric to Rutland — Austin, Texas
- COA Montopolis Water Resource Initiative (WRI) Tank — Austin, Texas
- COA Parmer Lane Interceptor Sewer Tunnel Access Shafts — Austin, Texas
- COA Shaw Lane Drill Field & Tower Repair Renovation — Austin, Texas
- Davis Water Treatment Plant Sludge Processing Improvements — Austin, Texas
- Downtown Wastewater Tunnel Project — Austin, Texas
- Downtown Wastewater Tunnel Seaholm Addition — Austin, Texas
- Holly Power Plant Decommissioning — Austin, Texas
- Plaza Saltillo Phase II Water Line Replacement — Austin, Texas
- Pilot Knob Pump Station Detention Pond — Austin, Texas
- Onion Creek Wastewater Interceptor: I-35 to Rinard — Austin, Texas
- Onion Creek Wastewater Interceptor: Rinard to Slaughter — Austin, Texas
- San Antonio Western B Extension Sewer — San Antonio, Texas
- Seaholm Substation Wall — Austin, Texas
- Ridgelea Stormwater Improvements — Austin, Texas
- Rosedale Storm Water/Water Quality Improvements — Austin, Texas
- Upper Gilleland Wastewater Interceptor, Preliminary Engineering Report — Austin, Texas
- Waller Creek Tunnel — Austin, Texas

#### Transportation

- Austin Bergstrom International Airport (ABIA) Cooling Tower Repairs — Austin, Texas
- ABIA R.O.N. Apron Expansion — Austin, Texas
- ABIA New Parking Lot — Austin, Texas
- COA Dynamic Parking System — Austin, Texas
- ABIA Stormwater Drainage Improvements — Austin, Texas
- ABIA Terminal Expansion — Austin, Texas
- ABIA Temporary Walkway — Austin, Texas
- COA 2nd Street Bridge Extension — Austin, Texas



## Hamzah Khataw, EIT

### Graduate Engineer

Hamzah is a graduate of the Texas A&M University where he obtained his Bachelor of Science in Civil Engineering and his Masters in Structural Engineering. He has extensive Structural Engineering design experience in both public and private sectors.

### Education

B.S., Civil Engineering, Texas A&M University, 2013

M.S., Structural Engineering, Texas A&M University, 2014

### Certification

Registered Engineer-In-Training  
Texas # 48778

### Professional Affiliations

American Society of Civil Engineers

### Contact

8500 Bluffstone Cove  
Bldg. B, Suite 103  
Austin, Texas 78759  
512.338.1101

[www.encotechengineering.com](http://www.encotechengineering.com)

*\*Prior Experience*

### Civic

- ABIA Terminal Expansion — Austin, Texas
- Austin Energy Regulatory Consulting Services — Austin, Texas
- Episcopal Church of the Good Shepherd — Austin, Texas
- LCRA Gym — Austin, Texas
- Life Austin Chapel — Austin, Texas
- Mt. Zion Baptist Church Addition — Austin, Texas
- Travis County Starflight Hangar Expansion Phase II — Austin, Texas

### Infrastructure

- ABIA Stormwater Drainage Improvements — Austin, Texas
- COA Montopolis Water Resource Initiative (WRI) Tank — Austin, Texas
- COA Parmer Lane Interceptor Sewer Tunnel Access Shafts — Austin, Texas
- COA Shaw Lane Drill Field & Tower Repair Renovation — Austin, Texas

### Transportation

- COA Mopac Bicycle Bridge: Barton Creek — Austin, Texas

TLSC 1-10. Please provide the data set out in Figure 2.1 of your "Overview of Rates Report to Council" at p. 2-10 of your rate filing package but subtract out all the costs and revenues that are not associated with AE's base rates. (Reference Bates Stamp p. 022.)

ANSWER:

The data set being requested for Figure 2.1 can be found within the 'AE RFP' model under the following sheet names:

- Schedule G-6
- Schedule G-7

This information may also be found in 'Austin Energy's Tariff Package' for 'Cost of Service Model – Redacted' at pages 232-233 of 347 (Bates stamp 991-992).

Prepared by: CM  
Sponsored by: Mark Dombroski

TLSC 1-11. Please provide the data set out in Figure 2.2 of your "Overview of Rates Report to Council" at p. 2-11 of your rate filing package but subtract out all the costs and revenues that are not associated with AE's base rates. (Reference Bates Stamp 023.)

ANSWER:

The data set being requested for Figure 2.2 can be found within the 'AE RFP' model under sheet name "WP G-10.2." This information may also be found in 'Austin Energy's Tariff Package' for 'Cost of Service Model – Redacted' at page 246 of 347 (Bates stamp 1005).

Prepared by: CM  
Sponsored by: Mark Dombroski

TLSC 1-12. Please explain why the difference between the residential Total Cost of Service (column 1) and residential Existing Base Rates and Test Year Pass-through rates (column 2) in Figure 2.2 referred to in RFI No. 1-11 above is the same as the data published for the residential Excess/(Deficient) Revenue (column 3) in Fig. 2.2 when column 3 is supposed to only be addressing base rates but the first two columns in Fig. 2.2 address costs and revenues from base rate costs and revenues as well as pass-through rates and underlying costs. (Reference Bates Stamp p. 023.)

ANSWER:

The Rate Filing Package only addresses base rate costs and revenues. Figure 2.2 is illustrating the overall percentage change needed. The 'total cost of service' column shows each customer class' cost to serve them, while 'existing base rates and test year pass-through rates' column shows the current revenue being generated from those classes. The excess/deficient revenue column shows only base rate revenue differences and none of the impacts of pass-through charges, since the pass-through information is the same within the first two columns.

Prepared by: CM  
Sponsored by: Mark Dombroski

TLSC 1-13. Where has AE offset the costs for the revenues AE realizes from Decker Creek Power Station that are realized from the plant's black generation function in its cost of service? Please identify the location of these revenue offsets in the cost of service by reference name and date stamp. (Reference p. 3-34, Bates Stamp p. 063.)

ANSWER:

This question is subject to a pending objection.

The revenues earned from Black Start designation and the costs (Austin Energy pays Black Start costs as a QSE) are recovered as part of the Power Supply Adjustment (PSA).

Prepared by: MM  
Sponsored by: Mark Dombroski

TLSC 1-14. Please identify each type of meter owned, maintained and operated by AE for residential customers including meters to measure a customer's usage for charging electric vehicles and meters that can either measure usage from the grid and usage from solar distributed energy to the grid or measure usage from solar distributed energy, and meters to measure usage to the customer from the grid.

ANSWER:

Austin Energy uses the following types of meters to register residential energy usage.

SIMPLE  
PV  
NET  
TOU (Time of Use)  
EV

Prepared by: JL  
Sponsored by: Elaina Ball

TLSC 1-15. For each type of meter identified in RFI No. 1-14, please provide the following:

- a. The average cost of the meter; and
- b. The number of meters included in the cost of service.

ANSWER:

- a. The current cost for the meter types listed in TLSC 1-14 are as follows  
  
SIMPLE \$160  
PV \$160  
NET \$160  
TOU (Time of Use) \$169  
EV \$169
- b. The information that is being requested within 'b' can be found within the 'AE RFP' model under sheet name "WP F-6.3". Or in 'Austin Energy's Tariff Package' for 'Cost of Service Model – Redacted' at page 186 of 347 (Bates stamp 945).

Prepared by: CM/JL  
Sponsored by: Elaina Ball / Mark Dombroski



TLSC 1-16. Does AE include any reserve fund costs in its Transmission cost of service used to set its transmission rates before the Texas Public Utility Commission? If so, please list each such reserve fund included in the TCOS, provide a short explanation of that reserve fund and how it is calculated.

ANSWER:

No. The return calculation included in PUC Docket No. 31462 did not include a request for reserves since test year reserves complied with financial policies. Austin Energy's current TCOS access charge was approved in PUC Docket No. 42385 and incorporated the return established in PUC Docket No. 31462.

Prepared by: RM  
Sponsored by: Mark Dombroski

TLSC 1-17. Please explain why the margin data for item #26 (non-electric expenses) in Figure 4.3 on p. 4-63 (Reference Bates Stamp p. 092) was not negative for purposes of deriving the adjustment to AE's revenue requirement to remove non-electric service expenses from the COS. In your explanation please explain why the non-electric expenses were actually reduced by the margin data.

ANSWER:

The margin data for item #26 is the net sum of adjustments found in the RFP in Schedule A, Column (B), lines 19, 23, and 25. As shown on Schedule A, positive adjustments to depreciation expense and contribution in aid of construction properly eliminate non-electric activity.

Prepared by: RM  
Sponsored by: Mark Dombroski

TLSC 1-18. Did AE include as expenses to its non-electric operations any costs relating to reserve funds? If the answer is yes, please identify each reserve fund and the corresponding costs for each such fund that were included as non-electric expenses.

ANSWER:

No. Reserve funding included in the revenue requirement was based on reserve adequacy analysis as shown in the RFP on WP C-3.2.1. Non-electric operations are not included in Austin Energy's revenue requirement. Therefore, Austin Energy's calculated reserve funding did not include expenses associated with non-electric operations.

Prepared by: RM  
Sponsored by: Mark Dombroski

TLSC 1-19. What was the dollar level of uncollectible accounts AE incurred in FY 2015?

ANSWER:

FY2015 unaudited bad debt expense is \$8,462,937.91.

Prepared by: SK  
Sponsored by: Mark Dombroski

TLSC 1-20. What was the dollar level of budgeted uncollectible accounts relied upon by AE for its FY 2016 budgeted operations approved by the Austin City Council?

ANSWER:

Austin Energy budgeted \$14,590,209 for Bad Debt expenses in FY 2016.

Prepared by: DK  
Sponsored by: Mark Dombroski

TLSC 1-21. Is AE's operating balance included in any of the reserve fund revenues identified in Figure 4.4, p. 4-68 (Reference Bates Stamp p. 097)? If so, please identify each such reserve fund and the amount of AE's operating balance included in the reserve.

ANSWER:

Yes. All of Austin Energy's operating balance is classified within working capital. This amount is shown in Figure 4.4 as working capital. The amount of the operating balance included within working capital for FY 2015 (unaudited) is \$249,687,000.

Prepared by: RM  
Sponsored by: Mark Dombroski

TLSC 1-22. What is the amount of AE's operating balance (both beginning and ending) for the test year; and what portion, if any, was included in any of its reserve funds?

ANSWER:

Operating cash balances are below:

TY beginning balance:	\$119,231,000.
TY ending balance:	\$150,800,000.

The operating balance is included in the working capital portion of the reserve funds.

Prepared by:	SK
Sponsored by:	Mark Dombroski

TLSC 1-23. How much of the economic development costs identified in Figure 5.7, p. 5-1- (Bates Stamp p. 113) has been allocated to the residential customer class in the cost of service?

ANSWER:

A total of \$38,815 of economic development costs have been allocated to the residential customer class, which can be found within the 'AE RFP' model under sheet name "Schedule G-6". It is also found at 'Austin Energy's Tariff Package' for 'Cost of Service Model – Redacted' at page 232 of 347 (Bates stamp 991).

Prepared by: CM  
Sponsored by: Mark Dombroski



TLSC 1-24. Using weather normalization adjustments to electrical usage, and for each fiscal year, what was the monthly average residential usage for AE for FY 2012, FY 2013, FY 2014 and FY 2015?

ANSWER:

By agreement of the parties, Austin Energy will be responding to this question on February 24.

Prepared by: ZD  
Sponsored by: Mark Dombroski

TLSC 1-25. At App. E, E-1 (Bates Stamp p. 372) AE references “three-phase electric service” for residential customers. Could you please explain what the term “three-phase electric service” is and how it is different from a residential customer receiving traditional electric service?

ANSWER:

Three-phase service refers to electric energy that is transmitted by three or four wires to the customer. Relatively high voltage or very large load customers usually receive three-phase power, compared to single-phase service where a facility (e.g., house, small office) has two energized wires coming into it. Typically, single-phase service supplies smaller needs of 120V/240V, requires less and simpler equipment and infrastructure to support. Single-phase service tends to be less expensive to install and maintain.

Prepared by: CM  
Sponsored by: Elaina Ball

TLSC 1-26. At p. 4-64 (Bates Stamp p. 093) of your rate filing package, you state that AE is requesting that annual expenditures increase to add \$19.4 for non-nuclear decommissioning. Please provide all workpapers, including the non-redacted portions underlying this calculation.

ANSWER:

The amount requested for non-nuclear decommissioning is shown on Work Paper D-1.2.5 of the RFP. The decommissioning costs listed on this work paper are taken from Appendix 2 in the NewGen Strategies & Solutions' *Summary of Austin Energy's Reserve Funds* report dated July 27, 2015, which starts at Bates Stamp page 513. The amount for Decker Creek is listed on Bates Stamp page 521. The amount for Fayette is listed on Bates Stamp page 523. The amount for Sand Hill Energy Center is listed on Bates Stamp page 524. The supporting documentation for these amounts are contained within the appendices to this report.

Prepared by: GR  
Sponsored by: Mark Dombroski

TLSC 1-27. What is the level of the non-nuclear decommissioning reserve for the test year (without the known and measureable adjustments); for FY 2015; and that was assumed in AE's FY 2016 operating budget approved by the Council?

ANSWER:

For the test year and FY 2015 the entirety of the non-nuclear decommissioning fund balance was dedicated to the retirement of the Holly Power Plant. The balance for TY 2014 (audited) was \$8,138,072. The balance for FY 2015 (unaudited) was \$7,791,978. No additional funding was included in 2016 budget for the non-nuclear decommissioning fund.

Prepared by: RM  
Sponsored by: Mark Dombroski

TLSC 1-28. Over how many years is AE intending to recover its non-nuclear decommissioning costs using \$19.4 million per annual contribution? (Reference Bates Stamp p. 093.)

ANSWER:

Decommissioning costs will be recovered over the estimated remaining term of each generating facility as noted in RFP, WP D-1.2.5. Total estimated decommissioning costs approximate \$80 million and assuming \$19.4 million in annual decommissioning costs results in total recovery in approximately 4.1 years. However, there are numerous variables that could impact and, therefore, change this decision. Pursuant to city council policy, Austin Energy prepares a cost of service model every five years. Non-nuclear decommissioning funding will be revisited at that time.

See also RFP, WP D-1.2.5

Prepared by: RM  
Sponsored by: Mark Dombroski

TLSC 1-29. At p. 2 of New Gen's Summary of AE's Reserves located at App.I (Bates Stamp p. 432), \$8,138,072 is listed in AE's non-nuclear decommissioning reserve for FY 2014. Where is this amount identified in AE's COS? Please identify the location by reference name and Bates Stamp. If this amount is not included in AE's COS, please explain why it is not included and what, if any, of that amount is included and where in the COS it is located?

ANSWER:

The existing non-nuclear decommissioning reserve is used to decommission the Holly Power Plant. Costs and reserves associated with Holly decommissioning have been removed from the cost of service. Non-nuclear decommissioning costs included in the Cost of Service are related to generation assets other than the Holly Power Plant. See RFP, WP D-1.2.5.

Prepared by: RM  
Sponsored by: Mark Dombroski

TLSC 1-30. What are the retirement dates (referred to as "expected plant closure" at App. D, P.D-4, Bates Stamp p. 371) for the Decker Creek Units 1 and 2, the Sandhill Energy Center and the Fayette Power Project plants? Please provide the dates by plant retirement.

ANSWER:

Please see Austin Energy's Response to NXP/Samsung RFI No. 1-112.

Prepared by: BE  
Sponsored by: Elaina Ball

TLSC 1-31. Please identify the source documents New Gen Strategies & Solutions relied upon in its review of the historical balance of each of AE's reserves as well as the sources of funding and "use of funds over time." (Ref. App. I, 1-17, Bates Stamp p. 443.)

ANSWER:

See Appendix 1 of NewGen Strategies & Solutions' *Summary of Austin Energy's Reserve Funds* report dated July 27, 2015 starting at Bates Stamp page 503 for the Austin Energy memorandum dated March 24, 2015 that is responsive to this inquiry.

Prepared by: GR  
Sponsored by: Mark Dombroski



TLSC 1-32. Please provide a copy of all New Gen Strategies & Solutions' workpapers, including non-redacted portions to its report on AE reserve funding. (Reference App. I, 1-17, Bates Stamp page 443.)

ANSWER:

Attachment 1 contains NewGen's workpapers associated with its report on AE reserve funding. By agreement of the parties, confidential information related to forced outage data has been redacted from the workpapers.

Attachments 2 and 3 contain two Austin Energy documents NewGen relied upon for its report on reserve funding.

Prepared by: GR  
Sponsored by: Mark Dombroski

**Purpose: Comparison of Rate Calculation for Cash in Hand Calculation Utilizing Industry Calculations**

Cash on Hand = Unrestricted Cash & Cash Equivalents / (Operating Expenses - Depreciation)x365

Reserve Fund Description	Requirement	Source Document	Annual \$				Austin Energy Calculation	PUCT
			2011-2012	2012-2013	2013-2014	2014-2015		
1 Unrestricted Reserves								
2 Working Capital		SD-4	\$ 48,668,471	\$ 119,230,805	\$ 150,799,894	\$ 187,515,594	\$ 68,055,905	\$ 65,075,872
3 Strategic Reserve - Emergency		SD-4	69,484,824	80,508,399	80,765,286	90,741,207	-	-
4 Strategic Reserve - Contingency		SD-4	68,122,357	25,487,620	25,811,754	16,586,412	71,071,246	71,071,246
5 Repair and Replacement		SD-4	64,071	64,071	64,071	64,071	76,225,000	76,225,000
6 Decommissioning Reserve		SD-7	15,093,817	11,490,144	8,138,072	8,138,072	8,138,072	8,138,072
7 Rate Stabilization							110,000,000	110,000,000
8 Subtotal Unrestricted Reserves			\$ 201,433,540	\$ 236,781,039	\$ 265,579,077	\$ 303,045,356	\$ 333,490,223	\$ 330,510,190
9								
10								
11 Operating Expenses								
12 Power Supply		SD-1	\$ 425,895,800	\$ 453,813,794	\$ 501,593,156	\$ 512,020,482	\$ 512,020,482	\$ 512,020,482
13 Recoverable Expenses		SD-1	72,863,583	88,412,053	113,221,998	125,581,534	125,581,534	125,581,534
14 Non-Fuel Operations & Maintenance		SD-1	203,198,200	223,409,129	237,180,183	275,383,609	275,383,609	275,383,609
15 Conservation		SD-1	12,680,727	12,694,638	12,940,926	16,566,323	16,566,323	16,566,323
16 Conservation Rebates		SD-1	16,701,991	22,569,294	24,060,314	23,953,221	23,953,221	23,953,221
17 Nuclear & Coal Plants Operating		SD-1	88,518,252	94,334,368	99,212,988	92,604,390	92,604,390	92,604,390
18 Other Operating Expenses		SD-1	7,200,294	18,936,801	23,289,872	17,919,932	17,919,932	17,919,932
19 Subtotal Operating Expenses			\$ 827,058,847	\$ 914,170,077	\$ 1,011,499,437	\$ 1,064,029,491	\$ 1,064,029,491	\$ 1,064,029,491
20 Less: Power Supply							512,020,482	512,020,482
21 Less: Recoverable Expenses							-	-
22 Less: Materials & Supplies		SD-6				\$ 9,013,340		9,013,340
23 Less: Pre-paid Expenses		SD-6				\$ 15,158,039		15,158,039
24 Subtotal Operating Expenses, Less Expenses							\$ 552,009,009	\$ 527,837,630
25 Add:								
26 General Fund Transfer		SD-1		\$ 105,000,000	\$ 105,000,000	\$ 105,000,000		
27 Add: Additional Transfers								
28 Voluntary Utility Assistance Fund		SD-1						
29 Trunked Radio		SD-1						
30 Workers' Compensation		SD-1						
31 Administrative Support		SD-1						
32 Communication & Technology		SD-1						
33 Economic Development Fund		SD-1						
34 Subtotal Additional Transfers							\$ -	\$ -
35								
36								
37 Subtotal Operating Expenses			\$ 827,058,847	\$ 914,170,077	\$ 1,011,499,437	\$ 1,064,029,491	\$ 552,009,009	\$ 527,837,630

38							
39	Unrestricted Reserves/ Operating Expenses					0.60	0.63
40							
41	Days of the Year	365	365	365	365	365	365
42							
43	Cash on Hand (days)	-	-	-	-	220.51	228.55
44							
45	Annual Depreciation	SD-2	144,909,000	150,031,000	152,450,000		

#### Source Documents

SD-1	FY15 Financial Policies Reserve Target Calculations
SD-2	AEcafr2014 pg30, AEcafr2013 pg 30, AEcafr2012 pg 30
SD-3	NewGen Strategies Reserve Fund data request
SD-4	March 24, 2015 Cash and Reserves Policy Memo
SD-5	AEcafr2014 pg97, AEcafr2013 pg 96, AEcafr2012 pg 93
SD-6	Estimate
SD-7	Non-Nuclear Decommissioning Reserve Balance - Report

				Fitch		
NewGen	NewGen	New Gen	New Gen	Working Capital 45	Working Capital 45	Working Capital 45
Working Capital Scenario I	Working Capital Scenario II	Contingency Scenario I	Contingency Scenario II	days without GFT	days with GFT	days with All Transfers
\$ 72,707,334	\$ 85,652,539	\$ 72,707,334	\$ 85,652,539	\$ 131,181,718	\$ 144,126,924	\$ 148,778,352
-	-	-	-	-	-	-
71,071,246	71,071,246	-	20,975,508	71,071,246	71,071,246	71,071,246
76,225,000	76,225,000	76,225,000	76,225,000	76,225,000	76,225,000	76,225,000
8,138,072	8,138,072	8,138,072	8,138,072	8,138,072	8,138,072	8,138,072
110,000,000	110,000,000	110,000,000	110,000,000	110,000,000	110,000,000	110,000,000
\$ 338,141,652	\$ 351,086,857	\$ 267,070,406	\$ 300,991,120	\$ 396,616,036	\$ 409,561,241	\$ 414,212,670
\$ 512,020,482	\$ 512,020,482	\$ 512,020,482	\$ 512,020,482	\$ 512,020,482	\$ 512,020,482	\$ 512,020,482
125,581,534	125,581,534	125,581,534	125,581,534	125,581,534	125,581,534	125,581,534
275,383,609	275,383,609	275,383,609	275,383,609	275,383,609	275,383,609	275,383,609
16,566,323	16,566,323	16,566,323	16,566,323	16,566,323	16,566,323	16,566,323
23,953,221	23,953,221	23,953,221	23,953,221	23,953,221	23,953,221	23,953,221
92,604,390	92,604,390	92,604,390	92,604,390	92,604,390	92,604,390	92,604,390
17,919,932	17,919,932	17,919,932	17,919,932	17,919,932	17,919,932	17,919,932
\$ 1,064,029,491	\$ 1,064,029,491	\$ 1,064,029,491	\$ 1,064,029,491	\$ 1,064,029,491	\$ 1,064,029,491	\$ 1,064,029,491
512,020,482	512,020,482	512,020,482	512,020,482			
-	-					
\$ 552,009,009	\$ 552,009,009	\$ 552,009,009	\$ 552,009,009	\$ 1,064,029,491	\$ 1,064,029,491	\$ 1,064,029,491
\$ -	\$ 105,000,000	\$ -	\$ 105,000,000	\$ -	\$ 105,000,000	\$ 105,000,000
\$ 600,000	\$ 600,000	\$ 600,000	\$ 600,000			\$ 600,000
282,961	282,961	282,961	282,961			282,961
2,338,903	2,338,903	2,338,903	2,338,903			2,338,903
20,132,282	20,132,282	20,132,282	20,132,282			20,132,282
5,985,656	5,985,656	5,985,656	5,985,656			5,985,656
8,388,453	8,388,453	8,388,453	8,388,453			8,388,453
\$ 37,728,255	\$ 37,728,255	\$ 37,728,255	\$ 37,728,255	\$ -	\$ -	\$ 37,728,255
\$ 589,737,264	\$ 694,737,264	\$ 589,737,264	\$ 694,737,264	\$ 1,064,029,491	\$ 1,169,029,491	\$ 1,206,757,746

0.57	0.51	0.45	0.43	0.37	0.35	0.34
365	365	365	365	365	365	365
209.28	184.45	165.30	158.13	136.05	127.88	125.28

**Summary of Unrestricted Reserves**  
**Austin Energy**  
**FY 2014**

<b>Item</b>	<b>Actual</b>	<b>Per Financial Policies</b>	<b>NewGen Recommendation</b>		
<b>Reserves</b>					
Working Capital	\$150,799,894	\$62,865,158	\$62,865,158	\$83,820,211	45 - 60 days range
Strategic Reserve - Emergency	\$80,765,286	\$83,820,211	\$0	\$0	eliminate
Strategic Reserve - Contingency	\$25,811,754	\$83,820,211	\$83,820,211	\$83,820,211	cap at 60 days
Repair and Replacement	\$64,071	\$75,015,500	\$75,015,500	\$75,015,500	min of 50% depr and uncapped
Rate Stabilization	\$0	\$123,680,504	\$123,680,504	\$164,907,339	90 - 120 days range
Subtotal Unrestricted Reserves	\$257,441,005	\$429,201,583	\$345,381,373	\$407,563,260	
Additional Reserves to Meet Credit Rating Goal	<b>\$158,243,695</b>	<b>-\$13,516,883</b>	<b>\$70,303,327</b>	<b>\$8,121,440</b>	(to be put in Capital Reserve)
Subtotal Unrestricted Reserves with Credit Rating Goal	\$415,684,700	\$415,684,700	\$415,684,700	\$415,684,700	
<b>Days Cash on Hand per Rating Agencies</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>	
Non-nuclear Decommissioning Reserve	\$8,138,072	\$8,138,072	<b>\$27,721,374</b>	<b>\$27,721,374</b>	based on high end estimate for Decker units
Total Unrestricted Reserves	\$423,822,772	\$423,822,772	\$443,406,074	\$443,406,074	
<b>O&amp;M</b>	<b>\$1,011,499,437</b>	<b>\$1,011,499,437</b>	<b>\$1,011,499,437</b>	<b>\$1,011,499,437</b>	
Power Supply	\$501,593,156	\$501,593,156	\$501,593,156	\$501,593,156	
Non-Power Supply O&M	\$509,906,281	\$509,906,281	\$509,906,281	\$509,906,281	
Power Supply		\$501,593,156	\$501,593,156	\$501,593,156	
Depreciation		\$150,031,000	\$150,031,000	\$150,031,000	
Transfers		\$37,728,255	\$37,728,255	\$37,728,255	
GFT		\$105,000,000	\$105,000,000	\$105,000,000	



**Purpose: Compare Austin Energy's Days fo Cash on Hand Utilizing Other Utility Formula for Days of Cash on Hand**

<b>Utility</b>	<b>Metric</b>	<b>Formula</b>
1 Austin Energy	Cash on Hand	Operating and Maintenance Expense, less fuel and purchase power
2 CPS	Cash on Hand	General Fund + Repair and Replacement Fund / Operating Expenses * 365
3 GP&L	Cash on Hand	Operating Expenses , excluding G&A transfer, ROI, cash funding CIP
4 Brownsville	Operating & Maintenance Expense, for the Current Fiscal Year	2 months (60 days of) Budgeted Operating and Maintenance Expense for the current year
5 LP&L	Gross Retail Rev	3 months of Average monthly revenue generated from all retail electric sales from previous fiscal year, shown in the CAFR
6 BTU	Expenditures	Operating Expenses (including Fuel and Purchased Power)











































































































	<b>Delivery Date</b>	<b>Source Document</b>	<b>MinOfSettlement Point Price</b>	<b>MaxOfSettlement Point Price</b>	<b>LZ_AEN</b>
1	12/1/2010	SD-1	14.29	53.04	24.23
2	12/2/2010	SD-1	16.51	39.07	25.75
3	12/3/2010	SD-1	13.24	31.98	24.82
4	12/4/2010	SD-1	(2.97)	79.31	21.44
5	12/5/2010	SD-1	16.90	135.24	36.37
6	12/6/2010	SD-1	26.03	985.05	53.91
7	12/7/2010	SD-1	16.88	39.01	25.72
8	12/8/2010	SD-1	19.37	174.93	32.45
9	12/9/2010	SD-1	19.94	217.01	31.21
10	12/10/2010	SD-1	(1.03)	1,285.00	53.04
11	12/11/2010	SD-1	(0.97)	28.75	19.57
12	12/12/2010	SD-1	20.99	179.99	39.08
13	12/13/2010	SD-1	22.68	37.79	27.37
14	12/14/2010	SD-1	17.11	60.04	26.40
15	12/15/2010	SD-1	12.57	779.69	38.07
16	12/16/2010	SD-1	12.44	206.57	30.44
17	12/17/2010	SD-1	20.73	102.24	31.24
18	12/18/2010	SD-1	22.14	274.76	32.51
19	12/19/2010	SD-1	17.33	30.32	24.16
20	12/20/2010	SD-1	13.59	29.35	21.93
21	12/21/2010	SD-1	17.06	100.71	26.97
22	12/22/2010	SD-1	15.18	85.45	26.97
23	12/23/2010	SD-1	23.66	69.36	28.75
24	12/24/2010	SD-1	22.03	32.46	24.21
25	12/25/2010	SD-1	21.63	64.74	29.06
26	12/26/2010	SD-1	19.29	81.47	31.70
27	12/27/2010	SD-1	17.96	33.52	26.87
28	12/28/2010	SD-1	15.62	29.96	23.83
29	12/29/2010	SD-1	15.37	26.76	21.96
30	12/30/2010	SD-1	9.45	31.69	21.53
31	12/31/2010	SD-1	6.44	179.99	28.46
32	1/1/2011	SD-1	20.68	50.96	27.12
33	1/2/2011	SD-1	20.40	74.36	29.09
34	1/3/2011	SD-1	15.65	29.54	23.44
35	1/4/2011	SD-1	15.46	50.45	29.61
36	1/5/2011	SD-1	18.06	1,609.03	72.42
37	1/6/2011	SD-1	24.20	2,231.25	57.31
38	1/7/2011	SD-1	22.16	1,549.53	70.90
39	1/8/2011	SD-1	16.58	41.83	25.88
40	1/9/2011	SD-1	15.86	42.25	26.87
41	1/10/2011	SD-1	22.78	39.62	32.05
42	1/11/2011	SD-1	22.13	242.22	40.28
43	1/12/2011	SD-1	28.43	104.92	36.56
44	1/13/2011	SD-1	27.35	46.12	33.64
45	1/14/2011	SD-1	27.16	40.94	31.76
46	1/15/2011	SD-1	28.07	106.96	34.71



47	1/16/2011 SD-1	25.12	65.70	34.06
48	1/17/2011 SD-1	18.71	38.81	26.66
49	1/18/2011 SD-1	15.74	33.97	24.83
50	1/19/2011 SD-1	17.91	39.18	23.47
51	1/20/2011 SD-1	17.40	264.63	38.92
52	1/21/2011 SD-1	21.86	54.27	33.36
53	1/22/2011 SD-1	15.09	138.03	31.82
54	1/23/2011 SD-1	21.56	86.56	29.97
55	1/24/2011 SD-1	21.73	43.06	29.04
56	1/25/2011 SD-1	21.95	112.90	32.66
57	1/26/2011 SD-1	24.69	50.19	30.21
58	1/27/2011 SD-1	16.53	2,237.00	62.37
59	1/28/2011 SD-1	12.57	34.39	24.33
60	1/29/2011 SD-1	12.66	31.33	20.10
61	1/30/2011 SD-1	0.37	48.52	23.75
62	1/31/2011 SD-1	12.36	43.97	22.56
63	2/1/2011 SD-1	9.64	88.94	32.27
64	2/2/2011 SD-1	36.27	3,001.11	789.26
65	2/3/2011 SD-1	35.80	770.35	84.49
66	2/4/2011 SD-1	35.39	63.75	47.61
67	2/5/2011 SD-1	14.19	41.53	28.89
68	2/6/2011 SD-1	14.92	28.70	20.45
69	2/7/2011 SD-1	(0.21)	36.07	23.82
70	2/8/2011 SD-1	4.26	485.64	33.79
71	2/9/2011 SD-1	0.75	40.99	28.47
72	2/10/2011 SD-1	22.82	205.27	35.31
73	2/11/2011 SD-1	20.60	38.35	26.70
74	2/12/2011 SD-1	16.33	35.54	25.90
75	2/13/2011 SD-1	10.93	27.11	20.86
76	2/14/2011 SD-1	10.02	75.30	24.93
77	2/15/2011 SD-1	12.91	82.46	30.51
78	2/16/2011 SD-1	3.15	40.04	22.77
79	2/17/2011 SD-1	2.83	38.07	19.94
80	2/18/2011 SD-1	3.72	40.08	24.50
81	2/19/2011 SD-1	10.82	76.38	23.06
82	2/20/2011 SD-1	(0.67)	29.10	17.03
83	2/21/2011 SD-1	2.49	46.67	25.03
84	2/22/2011 SD-1	16.35	1,955.30	48.10
85	2/23/2011 SD-1	14.44	32.40	22.41
86	2/24/2011 SD-1	11.55	50.47	22.73
87	2/25/2011 SD-1	16.73	57.71	27.09
88	2/26/2011 SD-1	17.08	57.33	24.31
89	2/27/2011 SD-1	9.52	128.84	24.66
90	2/28/2011 SD-1	13.12	132.85	24.33
91	3/1/2011 SD-1	(0.36)	42.69	24.90
92	3/2/2011 SD-1	0.92	39.26	24.54
93	3/3/2011 SD-1	5.97	3,001.00	66.75

94	3/4/2011 SD-1	6.95	39.95	23.17
95	3/5/2011 SD-1	1.99	39.31	21.01
96	3/6/2011 SD-1	8.75	26.47	22.48
97	3/7/2011 SD-1	9.82	28.26	22.07
98	3/8/2011 SD-1	15.25	1,028.99	42.89
99	3/9/2011 SD-1	13.68	40.49	26.68
100	3/10/2011 SD-1	8.55	40.68	24.15
101	3/11/2011 SD-1	6.42	102.12	21.19
102	3/12/2011 SD-1	4.74	57.52	22.94
103	3/13/2011 SD-1	16.19	150.53	26.00
104	3/14/2011 SD-1	(0.45)	57.87	23.29
105	3/15/2011 SD-1	16.31	28.45	23.24
106	3/16/2011 SD-1	14.19	43.02	20.81
107	3/17/2011 SD-1	8.08	56.40	21.29
108	3/18/2011 SD-1	9.62	78.44	25.08
109	3/19/2011 SD-1	17.62	45.25	26.39
110	3/20/2011 SD-1	4.86	93.26	23.54
111	3/21/2011 SD-1	3.57	32.36	23.71
112	3/22/2011 SD-1	14.67	156.55	31.05
113	3/23/2011 SD-1	11.14	87.18	29.98
114	3/24/2011 SD-1	10.01	175.65	29.26
115	3/25/2011 SD-1	13.91	1,326.30	46.43
116	3/26/2011 SD-1	16.53	150.45	28.96
117	3/27/2011 SD-1	22.41	50.04	28.97
118	3/28/2011 SD-1	20.83	42.80	28.03
119	3/29/2011 SD-1	17.75	47.83	26.68
120	3/30/2011 SD-1	16.59	36.89	27.19
121	3/31/2011 SD-1	15.52	44.95	27.48
122	4/1/2011 SD-1	1.75	29.53	22.09
123	4/2/2011 SD-1	9.03	39.77	27.03
124	4/3/2011 SD-1	9.82	40.79	24.60
125	4/4/2011 SD-1	21.10	76.74	28.85
126	4/5/2011 SD-1	18.98	42.24	25.86
127	4/6/2011 SD-1	18.50	43.99	27.86
128	4/7/2011 SD-1	8.30	109.17	28.58
129	4/8/2011 SD-1	21.49	40.43	30.17
130	4/9/2011 SD-1	12.03	34.41	23.68
131	4/10/2011 SD-1	16.60	1,080.38	57.32
132	4/11/2011 SD-1	19.45	583.87	35.35
133	4/12/2011 SD-1	14.47	37.83	26.26
134	4/13/2011 SD-1	13.59	40.23	26.07
135	4/14/2011 SD-1	21.56	981.54	42.12
136	4/15/2011 SD-1	22.70	30.07	25.81
137	4/16/2011 SD-1	20.92	27.62	23.98
138	4/17/2011 SD-1	11.94	50.68	23.82
139	4/18/2011 SD-1	20.27	46.17	33.22
140	4/19/2011 SD-1	21.63	94.88	37.71

141	4/20/2011 SD-1	24.96	43.35	32.72
142	4/21/2011 SD-1	20.11	54.05	31.97
143	4/22/2011 SD-1	13.55	43.69	27.87
144	4/23/2011 SD-1	20.68	53.35	30.30
145	4/24/2011 SD-1	24.26	42.47	31.24
146	4/25/2011 SD-1	17.55	781.58	41.62
147	4/26/2011 SD-1	21.24	555.79	38.14
148	4/27/2011 SD-1	(29.15)	332.29	35.49
149	4/28/2011 SD-1	16.77	47.71	32.29
150	4/29/2011 SD-1	8.98	39.19	24.21
151	4/30/2011 SD-1	15.96	741.57	41.94
152	5/1/2011 SD-1	15.39	78.62	29.33
153	5/2/2011 SD-1	16.05	51.49	27.52
154	5/3/2011 SD-1	9.29	79.00	30.99
155	5/4/2011 SD-1	2.69	53.16	22.65
156	5/5/2011 SD-1	2.35	57.08	30.00
157	5/6/2011 SD-1	20.86	38.04	27.92
158	5/7/2011 SD-1	2.17	44.75	24.27
159	5/8/2011 SD-1	10.33	38.40	25.40
160	5/9/2011 SD-1	15.51	42.67	27.45
161	5/10/2011 SD-1	12.19	32.71	24.11
162	5/11/2011 SD-1	20.56	30.99	24.89
163	5/12/2011 SD-1	19.42	44.57	26.32
164	5/13/2011 SD-1	10.20	59.50	26.48
165	5/14/2011 SD-1	17.82	1,018.98	38.41
166	5/15/2011 SD-1	12.77	1,047.70	42.01
167	5/16/2011 SD-1	18.86	68.91	30.94
168	5/17/2011 SD-1	1.86	46.13	23.90
169	5/18/2011 SD-1	14.54	110.32	31.92
170	5/19/2011 SD-1	21.51	45.36	26.17
171	5/20/2011 SD-1	23.52	1,759.88	67.15
172	5/21/2011 SD-1	22.98	59.90	30.08
173	5/22/2011 SD-1	22.74	125.69	37.23
174	5/23/2011 SD-1	22.72	65.25	34.42
175	5/24/2011 SD-1	21.13	154.51	34.24
176	5/25/2011 SD-1	22.06	197.79	45.54
177	5/26/2011 SD-1	(4.53)	55.98	31.98
178	5/27/2011 SD-1	(9.14)	58.22	33.97
179	5/28/2011 SD-1	20.37	472.64	41.50
180	5/29/2011 SD-1	17.94	45.22	30.71
181	5/30/2011 SD-1	22.40	44.66	31.56
182	5/31/2011 SD-1	22.83	2,964.44	67.99
183	6/1/2011 SD-1	22.96	48.45	32.18
184	6/2/2011 SD-1	15.36	51.27	32.12
185	6/3/2011 SD-1	9.04	55.46	35.67
186	6/4/2011 SD-1	14.77	50.76	32.75
187	6/5/2011 SD-1	15.19	49.68	33.68

188	6/6/2011 SD-1	18.55	64.31	34.58
189	6/7/2011 SD-1	10.70	68.94	34.45
190	6/8/2011 SD-1	17.70	50.26	33.83
191	6/9/2011 SD-1	21.05	110.18	35.87
192	6/10/2011 SD-1	16.98	65.68	33.08
193	6/11/2011 SD-1	19.80	57.44	34.24
194	6/12/2011 SD-1	10.67	56.58	32.28
195	6/13/2011 SD-1	19.91	958.94	56.77
196	6/14/2011 SD-1	23.56	139.31	40.93
197	6/15/2011 SD-1	24.65	183.02	57.45
198	6/16/2011 SD-1	19.56	81.87	36.31
199	6/17/2011 SD-1	24.33	127.42	40.69
200	6/18/2011 SD-1	22.03	70.01	36.82
201	6/19/2011 SD-1	20.17	45.07	30.95
202	6/20/2011 SD-1	23.51	51.98	35.61
203	6/21/2011 SD-1	25.37	1,179.00	69.02
204	6/22/2011 SD-1	23.08	47.61	30.84
205	6/23/2011 SD-1	4.31	54.57	32.25
206	6/24/2011 SD-1	21.75	45.97	33.17
207	6/25/2011 SD-1	22.47	44.05	32.26
208	6/26/2011 SD-1	19.00	1,227.36	45.03
209	6/27/2011 SD-1	23.69	3,001.00	161.26
210	6/28/2011 SD-1	23.79	626.52	56.48
211	6/29/2011 SD-1	20.68	53.45	35.17
212	6/30/2011 SD-1	18.12	48.32	32.93
213	7/1/2011 SD-1	21.39	48.00	35.14
214	7/2/2011 SD-1	20.64	57.50	35.49
215	7/3/2011 SD-1	19.98	47.94	33.37
216	7/4/2011 SD-1	22.45	58.73	35.56
217	7/5/2011 SD-1	22.47	66.33	37.92
218	7/6/2011 SD-1	23.57	54.74	36.77
219	7/7/2011 SD-1	20.38	50.49	35.96
220	7/8/2011 SD-1	24.15	61.06	37.32
221	7/9/2011 SD-1	24.74	52.11	36.26
222	7/10/2011 SD-1	21.88	52.67	35.10
223	7/11/2011 SD-1	24.97	56.57	36.85
224	7/12/2011 SD-1	25.83	58.97	39.37
225	7/13/2011 SD-1	25.39	2,038.06	66.68
226	7/14/2011 SD-1	25.86	137.63	43.86
227	7/15/2011 SD-1	26.05	61.06	39.64
228	7/16/2011 SD-1	25.32	50.52	37.48
229	7/17/2011 SD-1	24.06	79.74	42.15
230	7/18/2011 SD-1	26.46	247.58	45.50
231	7/19/2011 SD-1	26.57	409.92	54.84
232	7/20/2011 SD-1	23.39	149.82	45.42
233	7/21/2011 SD-1	25.86	1,139.06	58.18
234	7/22/2011 SD-1	25.74	64.63	38.24

235	7/23/2011 SD-1	24.03	63.85	38.32
236	7/24/2011 SD-1	19.50	76.89	40.21
237	7/25/2011 SD-1	24.93	295.62	63.25
238	7/26/2011 SD-1	23.51	95.45	39.57
239	7/27/2011 SD-1	22.58	72.78	39.80
240	7/28/2011 SD-1	24.82	104.09	42.70
241	7/29/2011 SD-1	25.70	51.97	38.50
242	7/30/2011 SD-1	23.26	65.82	38.41
243	7/31/2011 SD-1	23.80	829.72	48.53
244	8/1/2011 SD-1	24.87	3,001.00	176.23
245	8/2/2011 SD-1	23.56	3,001.00	348.57
246	8/3/2011 SD-1	24.86	3,001.00	452.63
247	8/4/2011 SD-1	24.24	3,001.00	478.58
248	8/5/2011 SD-1	20.28	3,001.00	338.14
249	8/6/2011 SD-1	20.25	101.10	37.87
250	8/7/2011 SD-1	15.74	73.97	36.67
251	8/8/2011 SD-1	18.85	1,802.53	96.24
252	8/9/2011 SD-1	22.65	796.27	79.03
253	8/10/2011 SD-1	21.34	586.94	69.55
254	8/11/2011 SD-1	22.60	62.33	35.74
255	8/12/2011 SD-1	23.97	253.43	42.92
256	8/13/2011 SD-1	24.15	39.17	30.82
257	8/14/2011 SD-1	22.95	52.92	34.93
258	8/15/2011 SD-1	24.34	84.48	39.13
259	8/16/2011 SD-1	23.59	183.96	38.98
260	8/17/2011 SD-1	23.67	341.51	60.43
261	8/18/2011 SD-1	22.06	1,155.06	75.61
262	8/19/2011 SD-1	21.86	306.10	41.58
263	8/20/2011 SD-1	24.05	598.93	59.21
264	8/21/2011 SD-1	22.99	337.37	55.43
265	8/22/2011 SD-1	23.25	2,121.90	90.23
266	8/23/2011 SD-1	23.48	3,000.66	277.01
267	8/24/2011 SD-1	24.05	3,001.00	412.19
268	8/25/2011 SD-1	12.90	49.79	31.79
269	8/26/2011 SD-1	17.14	623.06	81.92
270	8/27/2011 SD-1	18.24	2,950.25	151.64
271	8/28/2011 SD-1	4.67	1,309.75	90.75
272	8/29/2011 SD-1	20.93	2,929.56	83.21
273	8/30/2011 SD-1	11.01	55.35	31.14
274	8/31/2011 SD-1	19.52	112.39	35.96
275	9/1/2011 SD-1	22.53	247.15	40.63
276	9/2/2011 SD-1	26.75	1,168.19	79.31
277	9/3/2011 SD-1	24.31	54.09	38.46
278	9/4/2011 SD-1	13.07	332.17	34.52
279	9/5/2011 SD-1	13.87	219.18	27.08
280	9/6/2011 SD-1	4.85	319.06	35.92
281	9/7/2011 SD-1	12.76	1,176.77	78.90

282	9/8/2011 SD-1	(2.97)	284.65	31.12
283	9/9/2011 SD-1	14.72	151.73	29.54
284	9/10/2011 SD-1	17.25	51.60	30.56
285	9/11/2011 SD-1	15.56	339.73	44.69
286	9/12/2011 SD-1	12.92	97.30	34.40
287	9/13/2011 SD-1	19.51	1,437.86	112.60
288	9/14/2011 SD-1	24.41	41.68	32.00
289	9/15/2011 SD-1	13.56	49.90	28.86
290	9/16/2011 SD-1	23.53	56.14	31.50
291	9/17/2011 SD-1	13.93	36.51	24.86
292	9/18/2011 SD-1	13.07	215.77	33.28
293	9/19/2011 SD-1	22.32	53.94	32.17
294	9/20/2011 SD-1	9.41	51.96	26.82
295	9/21/2011 SD-1	14.13	215.39	34.37
296	9/22/2011 SD-1	16.15	44.42	28.52
297	9/23/2011 SD-1	20.70	217.21	29.41
298	9/24/2011 SD-1	4.62	47.66	25.38
299	9/25/2011 SD-1	16.66	50.62	31.20
300	9/26/2011 SD-1	18.11	484.29	44.45
301	9/27/2011 SD-1	23.26	51.14	32.81
302	9/28/2011 SD-1	22.79	66.99	34.78
303	9/29/2011 SD-1	16.86	67.77	30.74
304	9/30/2011 SD-1	16.31	36.89	25.20
305	10/1/2011 SD-1	21.52	45.02	29.25
306	10/2/2011 SD-1	5.84	38.45	21.55
307	10/3/2011 SD-1	12.59	35.80	24.65
308	10/4/2011 SD-1	17.59	59.17	26.24
309	10/5/2011 SD-1	15.58	46.01	24.45
310	10/6/2011 SD-1	17.53	609.82	36.85
311	10/7/2011 SD-1	22.45	452.34	45.16
312	10/8/2011 SD-1	20.33	206.21	36.57
313	10/9/2011 SD-1	20.19	116.60	24.68
314	10/10/2011 SD-1	19.82	46.83	26.11
315	10/11/2011 SD-1	18.22	44.07	26.57
316	10/12/2011 SD-1	18.28	55.23	30.92
317	10/13/2011 SD-1	19.27	211.23	36.81
318	10/14/2011 SD-1	(0.49)	154.13	23.47
319	10/15/2011 SD-1	16.44	209.45	29.48
320	10/16/2011 SD-1	4.91	380.69	39.09
321	10/17/2011 SD-1	12.99	797.05	38.61
322	10/18/2011 SD-1	17.01	26.40	20.82
323	10/19/2011 SD-1	15.22	28.18	22.72
324	10/20/2011 SD-1	12.83	30.60	21.43
325	10/21/2011 SD-1	17.08	44.54	27.73
326	10/22/2011 SD-1	14.33	39.18	24.71
327	10/23/2011 SD-1	21.81	46.64	28.76
328	10/24/2011 SD-1	14.78	49.09	26.74

329	10/25/2011 SD-1	7.88	45.65	24.04	
330	10/26/2011 SD-1	15.83	55.93	29.39	
331	10/27/2011 SD-1	11.89	437.05	32.95	
332	10/28/2011 SD-1	21.51	33.21	24.42	
333	10/29/2011 SD-1	10.85	28.29	22.71	
334	10/30/2011 SD-1	10.19	40.06	23.85	
335	10/31/2011 SD-1	20.54	116.92	28.24	
336	11/1/2011 SD-1	14.67	29.98	23.99	
337	11/2/2011 SD-1	15.55	35.55	24.08	
338	11/3/2011 SD-1	20.16	1,156.77	38.68	
339	11/4/2011 SD-1	21.00	32.67	23.89	
340	11/5/2011 SD-1	21.09	28.80	23.07	
341	11/6/2011 SD-1	14.65	2,991.08	88.64	
342	11/7/2011 SD-1	20.06	33.92	23.92	
343	11/8/2011 SD-1	19.97	60.50	27.55	
344	11/9/2011 SD-1	12.95	69.43	24.58	
345	11/10/2011 SD-1	21.23	34.09	26.02	
346	11/11/2011 SD-1	19.66	29.49	22.97	
347	11/12/2011 SD-1	20.35	31.46	23.59	
348	11/13/2011 SD-1	16.00	2,077.84	64.60	
349	11/14/2011 SD-1	21.26	490.50	46.79	
350	11/15/2011 SD-1	(79.91)	183.63	29.10	
351	11/16/2011 SD-1	19.02	28.55	23.33	
352	11/17/2011 SD-1	15.12	41.27	23.85	
353	11/18/2011 SD-1	18.97	24.34	21.82	
354	11/19/2011 SD-1	12.54	27.49	21.21	
355	11/20/2011 SD-1	20.49	27.32	24.14	
356	11/21/2011 SD-1	22.85	31.40	25.22	
357	11/22/2011 SD-1	20.70	33.45	24.38	
358	11/23/2011 SD-1	18.87	31.77	23.54	
359	11/24/2011 SD-1	3.98	20.96	14.51	
360	11/25/2011 SD-1	(3.07)	17.83	10.88	
361	11/26/2011 SD-1	1.89	19.40	13.00	
362	11/27/2011 SD-1	9.25	28.45	17.65	
363	11/28/2011 SD-1	18.31	30.50	23.00	
364	11/29/2011 SD-1	21.79	110.43	25.94	1.00
365	11/30/2011 SD-1	22.13	119.10	26.33	2.00
366	12/1/2011 SD-1	15.20	34.89	23.74	3.00
367	12/2/2011 SD-1	4.10	266.92	28.10	4.00
368	12/3/2011 SD-1	14.32	697.09	32.56	5.00
369	12/4/2011 SD-1	19.29	30.98	23.63	6.00
370	12/5/2011 SD-1	17.22	29.91	22.57	7.00
371	12/6/2011 SD-1	(17.06)	1,016.61	61.94	8.00
372	12/7/2011 SD-1	4.31	761.47	55.81	9.00
373	12/8/2011 SD-1	21.55	36.10	25.08	10.00
374	12/9/2011 SD-1	21.98	28.21	24.17	11.00
375	12/10/2011 SD-1	23.18	49.59	27.23	12.00

376	12/11/2011 SD-1	21.95	31.71	25.20	13.00
377	12/12/2011 SD-1	21.38	34.20	25.02	14.00
378	12/13/2011 SD-1	16.01	26.87	21.42	15.00
379	12/14/2011 SD-1	2.47	87.49	23.48	16.00
380	12/15/2011 SD-1	17.52	262.95	31.50	17.00
381	12/16/2011 SD-1	23.31	52.25	27.49	18.00
382	12/17/2011 SD-1	20.14	29.84	24.10	19.00
383	12/18/2011 SD-1	16.52	25.20	21.29	20.00
384	12/19/2011 SD-1	14.89	22.58	18.77	21.00
385	12/20/2011 SD-1	15.89	26.91	20.56	22.00
386	12/21/2011 SD-1	20.93	25.40	22.46	23.00
387	12/22/2011 SD-1	20.65	29.89	23.14	24.00
388	12/23/2011 SD-1	20.22	29.48	24.08	25.00
389	12/24/2011 SD-1	21.20	29.98	24.90	26.00
390	12/25/2011 SD-1	22.04	29.42	25.08	27.00
391	12/26/2011 SD-1	18.89	28.31	23.74	28.00
392	12/27/2011 SD-1	20.06	29.40	23.62	29.00
393	12/28/2011 SD-1	19.67	29.80	23.14	30.00
394	12/29/2011 SD-1	18.54	29.14	22.15	31.00
395	12/30/2011 SD-1	12.59	30.26	22.30	32.00
396	12/31/2011 SD-1	14.15	25.29	20.63	33.00
397	1/1/2012 SD-1	1.57	26.16	19.87	34.00
398	1/2/2012 SD-1	21.10	35.76	24.88	35.00
399	1/3/2012 SD-1	18.30	147.17	24.14	36.00
400	1/4/2012 SD-1	19.01	285.66	28.63	37.00
401	1/5/2012 SD-1	17.30	120.35	26.60	38.00
402	1/6/2012 SD-1	16.14	26.45	19.37	39.00
403	1/7/2012 SD-1	15.17	71.28	22.01	40.00
404	1/8/2012 SD-1	17.16	25.31	21.75	41.00
405	1/9/2012 SD-1	15.18	29.63	21.78	42.00
406	1/10/2012 SD-1	17.94	89.59	24.25	43.00
407	1/11/2012 SD-1	8.70	40.44	20.01	44.00
408	1/12/2012 SD-1	9.07	27.65	21.96	45.00
409	1/13/2012 SD-1	(13.56)	40.18	22.88	46.00
410	1/14/2012 SD-1	18.01	147.73	23.61	47.00
411	1/15/2012 SD-1	14.70	22.95	18.68	48.00
412	1/16/2012 SD-1	0.08	73.92	17.39	49.00
413	1/17/2012 SD-1	6.28	116.73	21.47	50.00
414	1/18/2012 SD-1	15.52	121.17	21.48	51.00
415	1/19/2012 SD-1	14.71	23.97	19.02	52.00
416	1/20/2012 SD-1	13.22	22.19	17.83	53.00
417	1/21/2012 SD-1	13.51	380.24	35.31	54.00
418	1/22/2012 SD-1	11.48	376.93	26.88	55.00
419	1/23/2012 SD-1	14.77	30.35	18.58	56.00
420	1/24/2012 SD-1	14.42	208.33	21.31	57.00
421	1/25/2012 SD-1	14.58	387.10	35.13	58.00
422	1/26/2012 SD-1	16.39	31.54	20.00	59.00



423	1/27/2012 SD-1	15.32	24.67	17.87	60.00
424	1/28/2012 SD-1	11.42	24.91	19.72	61.00
425	1/29/2012 SD-1	15.06	23.08	18.88	62.00
426	1/30/2012 SD-1	14.89	25.19	17.80	63.00
427	1/31/2012 SD-1	14.64	26.49	19.78	64.00
428	2/1/2012 SD-1	14.86	23.97	19.21	65.00
429	2/2/2012 SD-1	11.06	20.44	16.24	66.00
430	2/3/2012 SD-1	(0.10)	23.01	16.14	67.00
431	2/4/2012 SD-1	8.21	21.24	15.26	68.00
432	2/5/2012 SD-1	14.23	29.73	18.85	69.00
433	2/6/2012 SD-1	15.25	34.30	21.88	70.00
434	2/7/2012 SD-1	15.03	27.67	18.34	71.00
435	2/8/2012 SD-1	15.67	120.60	27.74	72.00
436	2/9/2012 SD-1	15.71	38.44	19.56	73.00
437	2/10/2012 SD-1	15.78	24.24	19.38	74.00
438	2/11/2012 SD-1	15.93	23.12	18.55	75.00
439	2/12/2012 SD-1	19.76	38.57	23.43	76.00
440	2/13/2012 SD-1	17.09	38.42	22.16	77.00
441	2/14/2012 SD-1	16.34	31.16	20.31	78.00
442	2/15/2012 SD-1	15.95	80.16	21.53	79.00
443	2/16/2012 SD-1	14.91	25.90	19.84	80.00
444	2/17/2012 SD-1	16.15	23.36	19.69	81.00
445	2/18/2012 SD-1	17.89	28.76	21.05	82.00
446	2/19/2012 SD-1	15.14	24.38	19.70	83.00
447	2/20/2012 SD-1	13.93	22.88	18.54	84.00
448	2/21/2012 SD-1	14.00	25.91	18.47	85.00
449	2/22/2012 SD-1	8.48	24.04	18.30	86.00
450	2/23/2012 SD-1	6.55	20.85	17.07	87.00
451	2/24/2012 SD-1	8.38	51.30	21.02	88.00
452	2/25/2012 SD-1	16.30	24.03	19.02	89.00
453	2/26/2012 SD-1	12.79	20.84	18.02	90.00
454	2/27/2012 SD-1	6.61	59.27	20.17	91.00
455	2/28/2012 SD-1	7.99	59.98	18.60	92.00
456	2/29/2012 SD-1	15.07	32.97	20.83	93.00
457	3/1/2012 SD-1	13.77	29.76	19.45	94.00
458	3/2/2012 SD-1	15.07	403.84	59.94	95.00
459	3/3/2012 SD-1	15.32	298.93	26.46	96.00
460	3/4/2012 SD-1	15.44	24.77	19.33	97.00
461	3/5/2012 SD-1	12.67	26.71	18.54	98.00
462	3/6/2012 SD-1	11.97	137.80	19.63	99.00
463	3/7/2012 SD-1	14.22	24.64	18.52	100.00
464	3/8/2012 SD-1	15.72	67.44	21.79	101.00
465	3/9/2012 SD-1	15.66	2,974.67	80.84	102.00
466	3/10/2012 SD-1	19.70	24.15	21.19	103.00
467	3/11/2012 SD-1	12.89	20.42	16.80	104.00
468	3/12/2012 SD-1	12.03	22.11	17.72	105.00
469	3/13/2012 SD-1	13.38	23.70	18.93	106.00

470	3/14/2012 SD-1	15.29	31.16	20.46	107.00
471	3/15/2012 SD-1	15.45	65.06	21.54	108.00
472	3/16/2012 SD-1	13.03	22.81	17.52	109.00
473	3/17/2012 SD-1	14.10	21.53	17.51	110.00
474	3/18/2012 SD-1	12.28	34.93	16.13	111.00
475	3/19/2012 SD-1	13.01	119.94	24.86	112.00
476	3/20/2012 SD-1	13.94	25.21	19.20	113.00
477	3/21/2012 SD-1	13.37	64.71	18.67	114.00
478	3/22/2012 SD-1	14.31	120.00	21.66	115.00
479	3/23/2012 SD-1	14.94	121.96	31.40	116.00
480	3/24/2012 SD-1	14.44	25.72	18.42	117.00
481	3/25/2012 SD-1	11.80	28.99	18.43	118.00
482	3/26/2012 SD-1	12.52	32.80	18.90	119.00
483	3/27/2012 SD-1	12.01	35.72	19.97	120.00
484	3/28/2012 SD-1	14.04	45.87	21.39	121.00
485	3/29/2012 SD-1	13.40	39.75	19.72	122.00
486	3/30/2012 SD-1	14.20	188.60	31.97	123.00
487	3/31/2012 SD-1	12.70	2,999.99	149.73	124.00
488	4/1/2012 SD-1	10.87	38.86	18.69	125.00
489	4/2/2012 SD-1	12.62	116.40	26.75	126.00
490	4/3/2012 SD-1	16.33	325.12	27.03	127.00
491	4/4/2012 SD-1	15.22	72.55	23.21	128.00
492	4/5/2012 SD-1	15.95	248.39	32.77	129.00
493	4/6/2012 SD-1	13.42	23.30	17.98	130.00
494	4/7/2012 SD-1	5.69	30.09	19.07	131.00
495	4/8/2012 SD-1	14.12	22.78	19.17	132.00
496	4/9/2012 SD-1	13.11	23.61	19.41	133.00
497	4/10/2012 SD-1	15.27	434.25	46.09	134.00
498	4/11/2012 SD-1	13.31	89.29	23.84	135.00
499	4/12/2012 SD-1	12.14	22.57	18.28	136.00
500	4/13/2012 SD-1	11.31	25.32	17.53	137.00
501	4/14/2012 SD-1	12.11	20.74	16.85	138.00
502	4/15/2012 SD-1	13.49	21.95	17.92	139.00
503	4/16/2012 SD-1	12.81	20.40	16.97	140.00
504	4/17/2012 SD-1	11.67	115.78	20.68	141.00
505	4/18/2012 SD-1	8.56	64.40	17.14	142.00
506	4/19/2012 SD-1	9.35	70.14	18.49	143.00
507	4/20/2012 SD-1	11.93	19.79	17.00	144.00
508	4/21/2012 SD-1	14.81	27.67	19.21	145.00
509	4/22/2012 SD-1	11.04	89.28	19.08	146.00
510	4/23/2012 SD-1	11.82	31.19	18.25	147.00
511	4/24/2012 SD-1	10.71	25.47	17.05	148.00
512	4/25/2012 SD-1	12.89	1,047.86	35.31	149.00
513	4/26/2012 SD-1	12.23	114.83	27.23	
514	4/27/2012 SD-1	12.77	29.69	20.37	
515	4/28/2012 SD-1	14.31	62.00	19.74	
516	4/29/2012 SD-1	14.23	24.81	18.88	

517	4/30/2012 SD-1	14.40	24.48	19.44
518	5/1/2012 SD-1	12.19	29.83	18.88
519	5/2/2012 SD-1	12.64	74.12	21.06
520	5/3/2012 SD-1	15.29	1,024.51	68.79
521	5/4/2012 SD-1	15.43	37.32	22.22
522	5/5/2012 SD-1	7.21	41.47	20.59
523	5/6/2012 SD-1	10.19	27.64	18.79
524	5/7/2012 SD-1	15.06	322.60	30.88
525	5/8/2012 SD-1	9.08	19.89	16.95
526	5/9/2012 SD-1	15.46	97.27	24.46
527	5/10/2012 SD-1	14.68	22.46	18.30
528	5/11/2012 SD-1	15.42	30.82	21.17
529	5/12/2012 SD-1	14.45	22.41	18.34
530	5/13/2012 SD-1	12.74	25.09	18.76
531	5/14/2012 SD-1	14.31	29.38	20.39
532	5/15/2012 SD-1	13.76	22.95	17.85
533	5/16/2012 SD-1	7.33	33.70	19.55
534	5/17/2012 SD-1	13.70	27.53	19.54
535	5/18/2012 SD-1	4.68	59.11	18.50
536	5/19/2012 SD-1	8.50	38.61	19.17
537	5/20/2012 SD-1	10.97	30.95	21.36
538	5/21/2012 SD-1	16.53	34.05	23.64
539	5/22/2012 SD-1	15.97	30.47	21.75
540	5/23/2012 SD-1	11.78	28.47	20.70
541	5/24/2012 SD-1	13.72	109.58	25.76
542	5/25/2012 SD-1	15.30	63.30	23.13
543	5/26/2012 SD-1	14.95	40.64	22.44
544	5/27/2012 SD-1	1.64	34.62	19.30
545	5/28/2012 SD-1	8.48	32.71	20.19
546	5/29/2012 SD-1	7.55	148.31	33.09
547	5/30/2012 SD-1	13.29	44.74	20.89
548	5/31/2012 SD-1	13.06	26.32	19.31
549	6/1/2012 SD-1	11.15	34.49	19.32
550	6/2/2012 SD-1	8.43	252.42	24.12
551	6/3/2012 SD-1	13.00	23.11	18.02
552	6/4/2012 SD-1	14.17	44.86	21.83
553	6/5/2012 SD-1	4.07	522.22	32.07
554	6/6/2012 SD-1	5.34	115.92	21.31
555	6/7/2012 SD-1	14.46	26.30	17.99
556	6/8/2012 SD-1	13.00	28.05	18.30
557	6/9/2012 SD-1	(2.43)	54.36	16.69
558	6/10/2012 SD-1	(1.18)	213.75	31.80
559	6/11/2012 SD-1	(20.69)	116.92	22.21
560	6/12/2012 SD-1	5.56	50.45	18.44
561	6/13/2012 SD-1	(1.22)	25.73	15.67
562	6/14/2012 SD-1	13.42	39.41	20.76
563	6/15/2012 SD-1	15.64	33.94	21.72

564	6/16/2012 SD-1	16.58	80.87	26.26
565	6/17/2012 SD-1	14.53	27.68	20.38
566	6/18/2012 SD-1	10.97	26.78	19.00
567	6/19/2012 SD-1	13.98	25.43	18.91
568	6/20/2012 SD-1	13.72	27.97	20.32
569	6/21/2012 SD-1	9.02	39.08	22.55
570	6/22/2012 SD-1	15.11	39.79	23.96
571	6/23/2012 SD-1	14.73	28.56	21.77
572	6/24/2012 SD-1	13.39	31.30	21.89
573	6/25/2012 SD-1	13.45	108.98	33.23
574	6/26/2012 SD-1	15.92	2,988.47	226.39
575	6/27/2012 SD-1	16.85	112.75	31.32
576	6/28/2012 SD-1	14.32	36.99	23.84
577	6/29/2012 SD-1	14.98	33.39	24.66
578	6/30/2012 SD-1	17.41	29.03	23.17
579	7/1/2012 SD-1	15.67	22.60	18.90
580	7/2/2012 SD-1	15.70	29.41	20.81
581	7/3/2012 SD-1	16.21	62.81	22.28
582	7/4/2012 SD-1	15.90	30.31	21.63
583	7/5/2012 SD-1	16.58	37.69	24.29
584	7/6/2012 SD-1	17.34	36.11	25.38
585	7/7/2012 SD-1	17.99	40.60	24.37
586	7/8/2012 SD-1	17.29	30.33	22.15
587	7/9/2012 SD-1	19.49	176.04	32.97
588	7/10/2012 SD-1	18.04	37.69	24.48
589	7/11/2012 SD-1	18.81	40.18	25.92
590	7/12/2012 SD-1	18.20	80.13	26.47
591	7/13/2012 SD-1	17.51	45.60	24.81
592	7/14/2012 SD-1	17.59	43.66	25.42
593	7/15/2012 SD-1	16.54	35.28	21.74
594	7/16/2012 SD-1	15.00	41.22	23.47
595	7/17/2012 SD-1	15.16	35.75	23.04
596	7/18/2012 SD-1	16.04	33.76	23.63
597	7/19/2012 SD-1	17.16	59.67	27.43
598	7/20/2012 SD-1	17.95	43.66	27.17
599	7/21/2012 SD-1	17.33	42.92	27.27
600	7/22/2012 SD-1	18.20	37.94	25.63
601	7/23/2012 SD-1	18.25	38.14	25.41
602	7/24/2012 SD-1	16.21	65.54	27.01
603	7/25/2012 SD-1	17.92	44.08	26.78
604	7/26/2012 SD-1	20.31	47.65	29.38
605	7/27/2012 SD-1	19.59	41.28	28.60
606	7/28/2012 SD-1	18.23	46.07	28.34
607	7/29/2012 SD-1	16.11	41.57	26.47
608	7/30/2012 SD-1	15.51	1,942.11	53.60
609	7/31/2012 SD-1	18.27	139.22	37.93
610	8/1/2012 SD-1	18.71	114.20	41.24

611	8/2/2012 SD-1	18.22	57.22	29.54
612	8/3/2012 SD-1	17.15	42.91	27.68
613	8/4/2012 SD-1	18.55	46.98	28.04
614	8/5/2012 SD-1	19.31	37.84	26.79
615	8/6/2012 SD-1	18.26	290.85	41.70
616	8/7/2012 SD-1	18.27	71.38	29.40
617	8/8/2012 SD-1	18.32	35.96	26.83
618	8/9/2012 SD-1	19.12	767.38	58.96
619	8/10/2012 SD-1	20.19	44.84	27.93
620	8/11/2012 SD-1	17.78	40.65	25.86
621	8/12/2012 SD-1	16.46	46.64	25.40
622	8/13/2012 SD-1	18.91	395.25	41.96
623	8/14/2012 SD-1	18.13	36.56	25.29
624	8/15/2012 SD-1	17.66	34.89	23.12
625	8/16/2012 SD-1	17.39	31.08	24.46
626	8/17/2012 SD-1	18.42	439.41	34.59
627	8/18/2012 SD-1	18.44	27.51	21.83
628	8/19/2012 SD-1	17.00	223.08	24.42
629	8/20/2012 SD-1	17.01	180.68	30.30
630	8/21/2012 SD-1	15.27	39.05	21.24
631	8/22/2012 SD-1	16.25	31.78	21.89
632	8/23/2012 SD-1	16.64	42.55	23.17
633	8/24/2012 SD-1	17.78	649.14	33.84
634	8/25/2012 SD-1	16.68	35.81	22.16
635	8/26/2012 SD-1	17.53	30.99	22.72
636	8/27/2012 SD-1	17.84	66.05	25.96
637	8/28/2012 SD-1	18.09	33.49	24.84
638	8/29/2012 SD-1	17.18	81.82	25.26
639	8/30/2012 SD-1	17.54	215.73	29.62
640	8/31/2012 SD-1	18.50	51.05	27.36
641	9/1/2012 SD-1	18.01	30.32	23.64
642	9/2/2012 SD-1	15.54	39.11	23.62
643	9/3/2012 SD-1	17.17	45.44	25.08
644	9/4/2012 SD-1	17.16	60.72	26.75
645	9/5/2012 SD-1	17.83	51.13	27.38
646	9/6/2012 SD-1	19.24	76.50	29.62
647	9/7/2012 SD-1	17.74	76.10	28.75
648	9/8/2012 SD-1	17.31	73.32	21.90
649	9/9/2012 SD-1	16.48	38.70	22.93
650	9/10/2012 SD-1	16.55	106.24	24.73
651	9/11/2012 SD-1	4.09	79.06	21.85
652	9/12/2012 SD-1	16.74	263.85	28.22
653	9/13/2012 SD-1	19.27	40.29	22.07
654	9/14/2012 SD-1	19.62	27.66	22.05
655	9/15/2012 SD-1	18.67	28.07	21.88
656	9/16/2012 SD-1	18.50	23.01	20.04
657	9/17/2012 SD-1	16.63	41.64	22.97

658	9/18/2012 SD-1	18.27	268.01	29.38
659	9/19/2012 SD-1	16.45	141.88	24.68
660	9/20/2012 SD-1	9.22	46.24	22.53
661	9/21/2012 SD-1	3.28	40.36	22.12
662	9/22/2012 SD-1	18.65	115.30	29.13
663	9/23/2012 SD-1	17.40	249.36	28.20
664	9/24/2012 SD-1	18.78	154.98	27.53
665	9/25/2012 SD-1	17.30	32.58	23.09
666	9/26/2012 SD-1	15.38	37.25	24.62
667	9/27/2012 SD-1	18.58	1,580.58	42.10
668	9/28/2012 SD-1	20.18	36.60	24.09
669	9/29/2012 SD-1	18.56	23.70	20.37
670	9/30/2012 SD-1	18.57	23.04	20.16
671	10/1/2012 SD-1	12.89	23.71	21.01
672	10/2/2012 SD-1	11.47	58.55	23.56
673	10/3/2012 SD-1	(3.40)	28.05	17.27
674	10/4/2012 SD-1	1.54	90.58	24.78
675	10/5/2012 SD-1	21.24	40.87	26.37
676	10/6/2012 SD-1	16.16	39.93	23.33
677	10/7/2012 SD-1	18.70	39.47	21.87
678	10/8/2012 SD-1	12.62	26.67	21.52
679	10/9/2012 SD-1	7.51	25.66	20.39
680	10/10/2012 SD-1	19.57	330.24	35.24
681	10/11/2012 SD-1	20.78	33.94	25.19
682	10/12/2012 SD-1	19.23	39.86	26.42
683	10/13/2012 SD-1	19.71	67.20	27.64
684	10/14/2012 SD-1	20.73	261.03	31.20
685	10/15/2012 SD-1	18.13	33.29	24.56
686	10/16/2012 SD-1	11.93	22.70	19.60
687	10/17/2012 SD-1	1.77	896.90	56.58
688	10/18/2012 SD-1	18.78	252.82	29.88
689	10/19/2012 SD-1	17.97	25.43	21.89
690	10/20/2012 SD-1	6.31	34.64	21.82
691	10/21/2012 SD-1	20.61	94.32	39.49
692	10/22/2012 SD-1	20.89	157.57	31.66
693	10/23/2012 SD-1	18.38	39.94	25.78
694	10/24/2012 SD-1	18.48	58.11	24.96
695	10/25/2012 SD-1	19.00	135.77	35.49
696	10/26/2012 SD-1	21.04	35.01	23.46
697	10/27/2012 SD-1	21.58	29.83	23.63
698	10/28/2012 SD-1	19.69	26.15	22.64
699	10/29/2012 SD-1	13.06	26.61	22.68
700	10/30/2012 SD-1	20.18	796.17	38.09
701	10/31/2012 SD-1	21.37	64.20	29.02
702	11/1/2012 SD-1	20.79	41.57	27.97
703	11/2/2012 SD-1	20.14	204.81	29.55
704	11/3/2012 SD-1	21.17	520.83	44.98

705	11/4/2012 SD-1	21.36	191.43	32.59
706	11/5/2012 SD-1	20.31	303.60	34.71
707	11/6/2012 SD-1	20.88	738.08	35.32
708	11/7/2012 SD-1	14.63	35.37	25.65
709	11/8/2012 SD-1	6.73	27.02	21.06
710	11/9/2012 SD-1	6.74	44.93	25.75
711	11/10/2012 SD-1	17.28	29.53	22.17
712	11/11/2012 SD-1	20.36	107.80	27.42
713	11/12/2012 SD-1	10.95	76.37	25.56
714	11/13/2012 SD-1	20.16	34.22	22.69
715	11/14/2012 SD-1	21.22	32.94	25.08
716	11/15/2012 SD-1	20.90	38.41	25.23
717	11/16/2012 SD-1	22.91	28.72	25.16
718	11/17/2012 SD-1	21.38	227.20	28.30
719	11/18/2012 SD-1	16.64	40.19	22.98
720	11/19/2012 SD-1	15.95	29.10	23.05
721	11/20/2012 SD-1	21.41	48.59	27.81
722	11/21/2012 SD-1	17.01	28.02	23.40
723	11/22/2012 SD-1	6.82	30.10	20.67
724	11/23/2012 SD-1	7.43	31.40	20.47
725	11/24/2012 SD-1	20.66	34.38	23.98
726	11/25/2012 SD-1	10.25	517.24	31.07
727	11/26/2012 SD-1	6.97	38.08	24.02
728	11/27/2012 SD-1	20.87	119.97	27.38
729	11/28/2012 SD-1	21.87	159.43	28.33
730	11/29/2012 SD-1	20.13	47.86	24.49
731	11/30/2012 SD-1	13.82	28.38	23.21
732	12/1/2012 SD-1	0.70	74.94	24.24
733	12/2/2012 SD-1	18.72	34.68	23.67
734	12/3/2012 SD-1	5.68	308.57	25.02
735	12/4/2012 SD-1	20.26	40.63	25.60
736	12/5/2012 SD-1	17.92	273.93	33.15
737	12/6/2012 SD-1	8.19	34.34	21.62
738	12/7/2012 SD-1	19.51	35.34	24.52
739	12/8/2012 SD-1	18.66	190.45	27.07
740	12/9/2012 SD-1	0.90	31.16	19.38
741	12/10/2012 SD-1	5.02	28.18	21.57
742	12/11/2012 SD-1	19.73	63.85	23.49
743	12/12/2012 SD-1	19.64	90.89	24.39
744	12/13/2012 SD-1	17.37	35.00	22.16
745	12/14/2012 SD-1	17.03	53.80	23.10
746	12/15/2012 SD-1	15.68	500.91	32.07
747	12/16/2012 SD-1	16.24	36.03	21.24
748	12/17/2012 SD-1	5.65	34.70	20.52
749	12/18/2012 SD-1	17.00	215.06	25.51
750	12/19/2012 SD-1	1.90	73.50	20.65
751	12/20/2012 SD-1	-	32.73	19.68

752	12/21/2012 SD-1	20.53	30.69	23.61
753	12/22/2012 SD-1	9.44	25.60	21.46
754	12/23/2012 SD-1	6.95	25.11	20.61
755	12/24/2012 SD-1	21.10	36.19	24.11
756	12/25/2012 SD-1	3.01	25.57	20.22
757	12/26/2012 SD-1	11.97	31.38	23.75
758	12/27/2012 SD-1	19.05	498.50	29.98
759	12/28/2012 SD-1	21.96	45.75	28.20
760	12/29/2012 SD-1	24.10	281.62	38.57
761	12/30/2012 SD-1	20.73	46.48	24.61
762	12/31/2012 SD-1	20.05	31.57	23.75
763	1/1/2013 SD-1	19.46	68.56	25.75
764	1/2/2013 SD-1	22.83	158.20	31.56
765	1/3/2013 SD-1	22.02	36.70	24.99
766	1/4/2013 SD-1	20.64	27.86	23.66
767	1/5/2013 SD-1	19.67	28.44	23.18
768	1/6/2013 SD-1	21.07	29.32	23.90
769	1/7/2013 SD-1	20.24	1,051.84	40.13
770	1/8/2013 SD-1	19.79	186.62	27.00
771	1/9/2013 SD-1	20.84	267.46	27.62
772	1/10/2013 SD-1	18.41	27.64	22.72
773	1/11/2013 SD-1	17.43	66.53	20.92
774	1/12/2013 SD-1	6.78	23.23	20.07
775	1/13/2013 SD-1	17.58	25.70	22.21
776	1/14/2013 SD-1	21.16	25.18	22.98
777	1/15/2013 SD-1	22.22	296.92	30.97
778	1/16/2013 SD-1	18.03	268.08	26.92
779	1/17/2013 SD-1	21.89	39.24	24.46
780	1/18/2013 SD-1	18.72	32.05	22.16
781	1/19/2013 SD-1	19.01	26.13	22.95
782	1/20/2013 SD-1	20.99	32.54	24.26
783	1/21/2013 SD-1	20.33	28.98	22.93
784	1/22/2013 SD-1	13.97	64.45	23.23
785	1/23/2013 SD-1	11.68	29.38	21.19
786	1/24/2013 SD-1	1.56	28.21	19.81
787	1/25/2013 SD-1	13.15	285.45	33.34
788	1/26/2013 SD-1	18.43	99.37	27.22
789	1/27/2013 SD-1	0.21	31.42	18.58
790	1/28/2013 SD-1	5.72	25.87	20.12
791	1/29/2013 SD-1	0.50	516.62	33.19
792	1/30/2013 SD-1	3.65	29.06	19.74
793	1/31/2013 SD-1	18.98	34.09	22.55
794	2/1/2013 SD-1	17.70	38.20	22.22
795	2/2/2013 SD-1	19.81	44.91	23.48
796	2/3/2013 SD-1	13.92	26.68	22.04
797	2/4/2013 SD-1	6.75	35.60	22.54
798	2/5/2013 SD-1	19.95	200.71	25.86



799	2/6/2013	SD-1	17.73	34.42	22.91
800	2/7/2013	SD-1	0.31	23.89	19.16
801	2/8/2013	SD-1	6.74	27.19	22.09
802	2/9/2013	SD-1	8.10	27.55	21.42
803	2/10/2013	SD-1	3.33	122.92	27.01
804	2/11/2013	SD-1	21.50	522.89	31.95
805	2/12/2013	SD-1	18.67	195.93	29.44
806	2/13/2013	SD-1	21.45	39.19	23.61
807	2/14/2013	SD-1	0.53	25.67	21.94
808	2/15/2013	SD-1	0.63	477.04	26.10
809	2/16/2013	SD-1	20.61	38.04	24.26
810	2/17/2013	SD-1	8.94	24.78	20.29
811	2/18/2013	SD-1	(0.10)	25.16	17.84
812	2/19/2013	SD-1	19.97	26.48	22.46
813	2/20/2013	SD-1	21.30	48.54	25.94
814	2/21/2013	SD-1	21.37	591.53	38.71
815	2/22/2013	SD-1	20.57	33.84	24.75
816	2/23/2013	SD-1	21.75	136.18	29.05
817	2/24/2013	SD-1	14.52	25.93	22.33
818	2/25/2013	SD-1	(0.22)	22.71	18.60
819	2/26/2013	SD-1	16.21	36.30	23.72
820	2/27/2013	SD-1	14.88	33.98	23.25
821	2/28/2013	SD-1	22.60	39.03	25.92
822	3/1/2013	SD-1	15.31	48.48	26.29
823	3/2/2013	SD-1	23.12	37.64	27.64
824	3/3/2013	SD-1	20.55	31.45	24.46
825	3/4/2013	SD-1	9.62	28.11	22.28
826	3/5/2013	SD-1	13.63	196.27	26.35
827	3/6/2013	SD-1	23.43	91.98	29.73
828	3/7/2013	SD-1	19.68	131.05	26.88
829	3/8/2013	SD-1	18.76	277.34	32.60
830	3/9/2013	SD-1	10.23	27.40	20.91
831	3/10/2013	SD-1	(0.89)	267.39	25.67
832	3/11/2013	SD-1	18.90	706.29	49.05
833	3/12/2013	SD-1	15.72	27.60	22.21
834	3/13/2013	SD-1	21.65	49.03	27.53
835	3/14/2013	SD-1	18.24	25.04	22.89
836	3/15/2013	SD-1	14.33	25.57	22.26
837	3/16/2013	SD-1	(0.99)	1,046.22	31.90
838	3/17/2013	SD-1	19.59	909.18	35.94
839	3/18/2013	SD-1	19.78	606.54	55.96
840	3/19/2013	SD-1	21.44	580.22	36.92
841	3/20/2013	SD-1	21.53	32.11	25.48
842	3/21/2013	SD-1	20.00	28.49	23.83
843	3/22/2013	SD-1	22.04	668.36	37.68
844	3/23/2013	SD-1	23.82	373.20	51.93
845	3/24/2013	SD-1	22.19	39.61	26.27

846	3/25/2013	SD-1	23.70	61.34	31.15
847	3/26/2013	SD-1	18.84	48.70	27.94
848	3/27/2013	SD-1	17.98	36.28	23.36
849	3/28/2013	SD-1	21.43	41.65	26.72
850	3/29/2013	SD-1	20.52	27.82	24.28
851	3/30/2013	SD-1	11.73	54.16	31.61
852	3/31/2013	SD-1	21.08	37.12	25.95
853	4/1/2013	SD-1	22.56	39.40	27.30
854	4/2/2013	SD-1	23.31	26.33	24.70
855	4/3/2013	SD-1	22.30	80.15	31.50
856	4/4/2013	SD-1	23.90	139.84	35.35
857	4/5/2013	SD-1	21.24	3,243.98	90.08
858	4/6/2013	SD-1	18.43	30.66	25.09
859	4/7/2013	SD-1	14.36	30.05	23.45
860	4/8/2013	SD-1	2.62	33.24	23.90
861	4/9/2013	SD-1	13.64	78.09	29.99
862	4/10/2013	SD-1	21.17	94.77	35.76
863	4/11/2013	SD-1	23.43	63.96	31.32
864	4/12/2013	SD-1	19.64	45.87	29.39
865	4/13/2013	SD-1	14.08	57.31	24.99
866	4/14/2013	SD-1	3.41	59.16	27.67
867	4/15/2013	SD-1	15.36	47.47	31.59
868	4/16/2013	SD-1	23.13	74.23	34.52
869	4/17/2013	SD-1	22.92	41.08	29.84
870	4/18/2013	SD-1	22.98	47.80	26.83
871	4/19/2013	SD-1	22.77	40.26	29.55
872	4/20/2013	SD-1	23.32	40.18	26.55
873	4/21/2013	SD-1	21.76	37.61	28.28
874	4/22/2013	SD-1	21.23	192.74	33.28
875	4/23/2013	SD-1	16.73	49.38	27.86
876	4/24/2013	SD-1	21.44	46.17	32.85
877	4/25/2013	SD-1	20.20	43.47	28.67
878	4/26/2013	SD-1	20.93	369.12	41.32
879	4/27/2013	SD-1	28.36	315.51	44.69
880	4/28/2013	SD-1	2.86	848.75	71.63
881	4/29/2013	SD-1	18.35	368.37	55.46
882	4/30/2013	SD-1	16.58	51.13	29.69
883	5/1/2013	SD-1	12.41	64.90	31.42
884	5/2/2013	SD-1	(7.95)	29.49	24.44
885	5/3/2013	SD-1	11.43	31.74	26.09
886	5/4/2013	SD-1	23.33	37.01	27.14
887	5/5/2013	SD-1	23.84	41.62	27.31
888	5/6/2013	SD-1	22.22	33.09	25.58
889	5/7/2013	SD-1	21.43	37.92	26.85
890	5/8/2013	SD-1	21.34	41.08	26.24
891	5/9/2013	SD-1	22.77	844.31	52.58
892	5/10/2013	SD-1	21.37	41.28	25.96

893	5/11/2013	SD-1	24.12	181.64	33.81
894	5/12/2013	SD-1	22.00	36.90	27.54
895	5/13/2013	SD-1	20.59	40.74	28.86
896	5/14/2013	SD-1	20.98	38.84	26.99
897	5/15/2013	SD-1	22.66	92.90	30.47
898	5/16/2013	SD-1	17.08	59.60	32.23
899	5/17/2013	SD-1	23.33	88.89	35.53
900	5/18/2013	SD-1	11.90	45.64	29.14
901	5/19/2013	SD-1	14.10	308.39	40.35
902	5/20/2013	SD-1	22.33	49.98	33.72
903	5/21/2013	SD-1	23.18	53.85	30.67
904	5/22/2013	SD-1	11.24	54.79	30.52
905	5/23/2013	SD-1	11.21	82.44	28.84
906	5/24/2013	SD-1	18.72	41.09	28.44
907	5/25/2013	SD-1	21.87	33.34	25.44
908	5/26/2013	SD-1	9.54	33.57	25.30
909	5/27/2013	SD-1	4.60	535.69	49.34
910	5/28/2013	SD-1	8.80	71.30	30.31
911	5/29/2013	SD-1	21.13	97.00	24.75
912	5/30/2013	SD-1	20.18	393.35	43.90
913	5/31/2013	SD-1	22.26	76.75	32.32
914	6/1/2013	SD-1	21.57	69.60	32.32
915	6/2/2013	SD-1	21.80	48.47	27.61
916	6/3/2013	SD-1	20.84	441.25	43.61
917	6/4/2013	SD-1	5.59	85.41	31.05
918	6/5/2013	SD-1	15.89	405.59	38.66
919	6/6/2013	SD-1	23.25	61.53	32.78
920	6/7/2013	SD-1	23.74	45.59	29.83
921	6/8/2013	SD-1	(1.51)	40.65	27.22
922	6/9/2013	SD-1	20.27	38.95	28.20
923	6/10/2013	SD-1	(0.19)	61.50	28.64
924	6/11/2013	SD-1	21.86	107.62	36.22
925	6/12/2013	SD-1	20.95	230.76	39.59
926	6/13/2013	SD-1	22.78	65.85	34.06
927	6/14/2013	SD-1	24.23	47.46	31.63
928	6/15/2013	SD-1	21.31	46.89	31.00
929	6/16/2013	SD-1	19.72	92.45	32.24
930	6/17/2013	SD-1	23.01	86.98	35.12
931	6/18/2013	SD-1	23.25	95.58	31.88
932	6/19/2013	SD-1	17.87	243.72	41.23
933	6/20/2013	SD-1	20.09	70.43	36.39
934	6/21/2013	SD-1	21.89	74.02	36.03
935	6/22/2013	SD-1	19.46	257.55	42.54
936	6/23/2013	SD-1	17.65	59.05	30.57
937	6/24/2013	SD-1	21.53	145.04	37.17
938	6/25/2013	SD-1	21.47	125.69	38.89
939	6/26/2013	SD-1	21.52	71.47	34.93

940	6/27/2013	SD-1	21.22	291.07	42.02
941	6/28/2013	SD-1	22.84	99.68	36.97
942	6/29/2013	SD-1	21.77	104.68	36.36
943	6/30/2013	SD-1	20.92	193.64	31.07
944	7/1/2013	SD-1	21.12	38.75	29.27
945	7/2/2013	SD-1	20.63	60.01	31.04
946	7/3/2013	SD-1	20.44	396.71	37.64
947	7/4/2013	SD-1	19.57	38.54	26.39
948	7/5/2013	SD-1	10.94	359.28	38.55
949	7/6/2013	SD-1	13.71	52.84	29.84
950	7/7/2013	SD-1	20.33	179.38	35.73
951	7/8/2013	SD-1	21.50	49.89	29.76
952	7/9/2013	SD-1	21.31	64.36	32.30
953	7/10/2013	SD-1	22.40	52.23	33.87
954	7/11/2013	SD-1	21.96	63.51	34.02
955	7/12/2013	SD-1	21.79	59.26	32.61
956	7/13/2013	SD-1	21.28	922.39	61.01
957	7/14/2013	SD-1	21.33	56.39	25.90
958	7/15/2013	SD-1	17.38	27.81	23.62
959	7/16/2013	SD-1	21.72	351.64	46.54
960	7/17/2013	SD-1	21.62	284.50	40.55
961	7/18/2013	SD-1	21.66	67.37	33.63
962	7/19/2013	SD-1	22.30	285.60	34.08
963	7/20/2013	SD-1	21.54	536.11	74.31
964	7/21/2013	SD-1	21.93	1,150.19	162.85
965	7/22/2013	SD-1	23.00	74.17	37.32
966	7/23/2013	SD-1	16.58	818.62	42.08
967	7/24/2013	SD-1	21.36	45.95	30.54
968	7/25/2013	SD-1	22.54	44.50	31.55
969	7/26/2013	SD-1	21.47	40.00	28.37
970	7/27/2013	SD-1	23.12	54.24	29.03
971	7/28/2013	SD-1	19.35	56.93	28.64
972	7/29/2013	SD-1	21.93	44.03	29.79
973	7/30/2013	SD-1	20.37	110.17	34.83
974	7/31/2013	SD-1	20.93	54.57	32.13
975	8/1/2013	SD-1	22.11	58.48	33.10
976	8/2/2013	SD-1	20.47	220.27	33.52
977	8/3/2013	SD-1	18.93	62.78	30.14
978	8/4/2013	SD-1	19.72	43.94	29.82
979	8/5/2013	SD-1	20.29	69.93	31.95
980	8/6/2013	SD-1	18.25	48.66	30.39
981	8/7/2013	SD-1	20.41	119.12	33.61
982	8/8/2013	SD-1	21.40	44.27	29.56
983	8/9/2013	SD-1	21.04	47.58	29.98
984	8/10/2013	SD-1	21.36	47.91	28.95
985	8/11/2013	SD-1	21.28	61.56	28.89
986	8/12/2013	SD-1	21.22	468.82	39.80

987	8/13/2013	SD-1	21.92	119.00	32.93
988	8/14/2013	SD-1	21.61	132.16	29.56
989	8/15/2013	SD-1	20.39	51.98	27.21
990	8/16/2013	SD-1	20.32	312.12	29.76
991	8/17/2013	SD-1	19.86	40.42	26.36
992	8/18/2013	SD-1	(0.01)	44.79	22.79
993	8/19/2013	SD-1	19.78	49.16	28.95
994	8/20/2013	SD-1	19.67	42.34	28.83
995	8/21/2013	SD-1	20.03	294.28	35.71
996	8/22/2013	SD-1	20.86	76.87	34.98
997	8/23/2013	SD-1	21.80	617.28	43.47
998	8/24/2013	SD-1	(6.08)	154.54	36.22
999	8/25/2013	SD-1	21.90	59.89	31.34
1,000	8/26/2013	SD-1	21.64	37.87	27.97
1,001	8/27/2013	SD-1	21.48	40.61	27.93
1,002	8/28/2013	SD-1	19.56	44.36	28.71
1,003	8/29/2013	SD-1	21.53	78.26	35.42
1,004	8/30/2013	SD-1	21.81	113.26	37.84
1,005	8/31/2013	SD-1	21.61	47.52	31.92
1,006	9/1/2013	SD-1	21.82	73.72	35.08
1,007	9/2/2013	SD-1	22.92	67.53	32.05
1,008	9/3/2013	SD-1	23.00	4,900.00	141.11
1,009	9/4/2013	SD-1	23.31	516.27	61.61
1,010	9/5/2013	SD-1	23.77	52.51	35.51
1,011	9/6/2013	SD-1	22.94	48.31	34.60
1,012	9/7/2013	SD-1	23.67	51.15	33.10
1,013	9/8/2013	SD-1	22.42	47.24	29.92
1,014	9/9/2013	SD-1	22.21	43.98	30.33
1,015	9/10/2013	SD-1	23.12	61.21	31.11
1,016	9/11/2013	SD-1	22.22	51.70	32.79
1,017	9/12/2013	SD-1	22.84	60.51	33.45
1,018	9/13/2013	SD-1	23.37	43.93	32.31
1,019	9/14/2013	SD-1	23.85	286.88	34.81
1,020	9/15/2013	SD-1	22.00	47.84	30.31
1,021	9/16/2013	SD-1	23.79	98.23	36.26
1,022	9/17/2013	SD-1	24.12	46.59	33.78
1,023	9/18/2013	SD-1	22.87	76.60	33.83
1,024	9/19/2013	SD-1	3.55	56.13	32.90
1,025	9/20/2013	SD-1	(7.83)	26.50	23.08
1,026	9/21/2013	SD-1	21.66	43.32	26.52
1,027	9/22/2013	SD-1	16.65	45.03	25.34
1,028	9/23/2013	SD-1	(4.04)	77.86	26.22
1,029	9/24/2013	SD-1	(7.28)	658.78	83.72
1,030	9/25/2013	SD-1	19.64	43.69	27.29
1,031	9/26/2013	SD-1	(5.53)	47.06	24.83
1,032	9/27/2013	SD-1	20.17	95.96	26.68
1,033	9/28/2013	SD-1	17.17	48.80	26.89

1,034	9/29/2013	SD-1	22.20	39.64	28.63
1,035	9/30/2013	SD-1	18.92	77.56	28.25
1,036	10/1/2013	SD-1	21.31	1,996.18	144.78
1,037	10/2/2013	SD-1	21.83	93.62	32.78
1,038	10/3/2013	SD-1	21.88	62.34	33.46
1,039	10/4/2013	SD-1	22.37	79.63	32.69
1,040	10/5/2013	SD-1	22.34	281.48	33.75
1,041	10/6/2013	SD-1	21.69	262.09	34.13
1,042	10/7/2013	SD-1	21.10	66.33	28.09
1,043	10/8/2013	SD-1	-	31.50	22.81
1,044	10/9/2013	SD-1	6.50	48.38	26.44
1,045	10/10/2013	SD-1	21.07	47.97	29.88
1,046	10/11/2013	SD-1	18.46	281.16	36.73
1,047	10/12/2013	SD-1	23.82	742.75	59.57
1,048	10/13/2013	SD-1	22.58	29.94	24.87
1,049	10/14/2013	SD-1	21.09	274.42	30.45
1,050	10/15/2013	SD-1	22.33	31.42	26.78
1,051	10/16/2013	SD-1	22.90	40.08	29.10
1,052	10/17/2013	SD-1	20.75	31.00	26.07
1,053	10/18/2013	SD-1	18.41	270.65	29.53
1,054	10/19/2013	SD-1	20.45	29.55	23.38
1,055	10/20/2013	SD-1	1.28	24.30	19.07
1,056	10/21/2013	SD-1	9.27	272.23	27.07
1,057	10/22/2013	SD-1	20.90	48.96	26.44
1,058	10/23/2013	SD-1	19.31	37.31	24.66
1,059	10/24/2013	SD-1	15.77	40.34	26.58
1,060	10/25/2013	SD-1	19.70	28.84	23.54
1,061	10/26/2013	SD-1	12.92	544.28	48.06
1,062	10/27/2013	SD-1	18.19	69.15	29.92
1,063	10/28/2013	SD-1	15.60	31.99	23.56
1,064	10/29/2013	SD-1	20.76	511.53	43.65
1,065	10/30/2013	SD-1	20.25	556.10	50.27
1,066	10/31/2013	SD-1	23.12	152.23	31.63
1,067	11/1/2013	SD-1	2.20	64.09	24.90
1,068	11/2/2013	SD-1	19.77	87.83	32.08
1,069	11/3/2013	SD-1	0.83	24.08	19.96
1,070	11/4/2013	SD-1	11.83	269.84	30.26
1,071	11/5/2013	SD-1	18.77	560.19	42.71
1,072	11/6/2013	SD-1	17.23	267.44	35.63
1,073	11/7/2013	SD-1	21.66	65.18	27.90
1,074	11/8/2013	SD-1	17.78	27.16	23.24
1,075	11/9/2013	SD-1	15.66	32.53	23.30
1,076	11/10/2013	SD-1	20.07	144.20	25.08
1,077	11/11/2013	SD-1	19.58	47.60	27.44
1,078	11/12/2013	SD-1	(0.92)	259.80	24.97
1,079	11/13/2013	SD-1	22.59	110.43	28.51
1,080	11/14/2013	SD-1	20.39	72.66	25.47

1,081	11/15/2013	SD-1	18.56	63.23	25.57
1,082	11/16/2013	SD-1	18.13	32.72	23.15
1,083	11/17/2013	SD-1	21.64	267.14	32.73
1,084	11/18/2013	SD-1	22.20	307.34	53.24
1,085	11/19/2013	SD-1	20.47	24.42	22.86
1,086	11/20/2013	SD-1	19.84	637.24	33.03
1,087	11/21/2013	SD-1	20.82	49.28	27.56
1,088	11/22/2013	SD-1	19.03	1,379.99	77.75
1,089	11/23/2013	SD-1	25.66	58.46	32.89
1,090	11/24/2013	SD-1	24.94	43.99	31.27
1,091	11/25/2013	SD-1	24.61	44.75	31.49
1,092	11/26/2013	SD-1	22.10	35.24	26.41
1,093	11/27/2013	SD-1	24.79	43.95	29.11
1,094	11/28/2013	SD-1	22.01	265.99	29.37
1,095	11/29/2013	SD-1	20.80	267.85	29.58
1,096	11/30/2013	SD-1	16.59	25.70	22.87
1,097	12/1/2013	SD-1	20.59	27.65	23.62
1,098	12/2/2013	SD-1	21.57	794.09	45.47
1,099	12/3/2013	SD-1	21.35	30.95	24.43
1,100	12/4/2013	SD-1	17.30	49.48	26.18
1,101	12/5/2013	SD-1	7.23	342.54	31.03
1,102	12/6/2013	SD-1	23.81	93.91	36.07
1,103	12/7/2013	SD-1	31.79	53.76	43.70
1,104	12/8/2013	SD-1	24.94	61.52	36.41
1,105	12/9/2013	SD-1	23.18	57.33	36.01
1,106	12/10/2013	SD-1	24.73	287.21	46.58
1,107	12/11/2013	SD-1	24.45	59.43	31.21
1,108	12/12/2013	SD-1	24.57	551.68	41.71
1,109	12/13/2013	SD-1	23.84	37.88	28.53
1,110	12/14/2013	SD-1	22.43	490.11	53.93
1,111	12/15/2013	SD-1	23.77	512.80	45.91
1,112	12/16/2013	SD-1	24.09	584.78	51.00
1,113	12/17/2013	SD-1	23.96	54.28	29.83
1,114	12/18/2013	SD-1	10.04	35.75	25.10
1,115	12/19/2013	SD-1	15.24	153.37	25.58
1,116	12/20/2013	SD-1	21.95	275.18	29.18
1,117	12/21/2013	SD-1	22.79	530.06	45.58
1,118	12/22/2013	SD-1	23.36	83.28	29.28
1,119	12/23/2013	SD-1	23.69	84.95	31.52
1,120	12/24/2013	SD-1	19.08	37.36	26.17
1,121	12/25/2013	SD-1	20.02	27.22	24.08
1,122	12/26/2013	SD-1	24.60	284.96	45.43
1,123	12/27/2013	SD-1	24.99	90.61	36.18
1,124	12/28/2013	SD-1	21.92	48.24	27.87
1,125	12/29/2013	SD-1	21.63	84.12	30.21
1,126	12/30/2013	SD-1	28.25	459.58	42.12
1,127	12/31/2013	SD-1	23.30	43.51	30.40

1,128	1/1/2014 SD-1	19.54	26.61	23.92
1,129	1/2/2014 SD-1	20.51	308.76	42.80
1,130	1/3/2014 SD-1	23.20	31.46	27.21
1,131	1/4/2014 SD-1	(0.82)	30.61	24.48
1,132	1/5/2014 SD-1	(0.02)	42.24	25.94
1,133	1/6/2014 SD-1	26.38	5,441.93	524.76
1,134	1/7/2014 SD-1	22.84	636.15	75.71
1,135	1/8/2014 SD-1	24.43	162.60	35.38
1,136	1/9/2014 SD-1	14.82	50.32	32.08
1,137	1/10/2014 SD-1	10.87	531.73	29.68
1,138	1/11/2014 SD-1	19.19	205.71	32.03
1,139	1/12/2014 SD-1	15.87	36.27	23.33
1,140	1/13/2014 SD-1	-	41.16	23.58
1,141	1/14/2014 SD-1	19.64	261.48	30.76
1,142	1/15/2014 SD-1	23.01	50.44	29.51
1,143	1/16/2014 SD-1	19.99	59.96	27.83
1,144	1/17/2014 SD-1	23.05	110.47	30.92
1,145	1/18/2014 SD-1	25.10	106.22	32.78
1,146	1/19/2014 SD-1	19.55	44.02	28.83
1,147	1/20/2014 SD-1	20.34	39.03	27.25
1,148	1/21/2014 SD-1	18.91	34.14	26.24
1,149	1/22/2014 SD-1	8.07	215.99	30.94
1,150	1/23/2014 SD-1	0.41	77.71	28.99
1,151	1/24/2014 SD-1	31.84	234.19	63.11
1,152	1/25/2014 SD-1	22.31	48.68	33.82
1,153	1/26/2014 SD-1	12.17	33.89	24.95
1,154	1/27/2014 SD-1	(1.29)	46.24	25.24
1,155	1/28/2014 SD-1	24.64	116.01	48.23
1,156	1/29/2014 SD-1	25.34	228.10	45.19
1,157	1/30/2014 SD-1	10.99	93.55	33.65
1,158	1/31/2014 SD-1	20.07	356.98	35.33
1,159	2/1/2014 SD-1	20.98	278.55	40.31
1,160	2/2/2014 SD-1	18.72	192.52	42.34
1,161	2/3/2014 SD-1	30.90	320.06	55.95
1,162	2/4/2014 SD-1	22.74	556.79	59.51
1,163	2/5/2014 SD-1	22.00	123.28	44.73
1,164	2/6/2014 SD-1	35.31	959.37	309.15
1,165	2/7/2014 SD-1	37.75	224.71	79.63
1,166	2/8/2014 SD-1	23.89	206.95	43.07
1,167	2/9/2014 SD-1	26.80	332.65	48.29
1,168	2/10/2014 SD-1	24.69	729.24	109.31
1,169	2/11/2014 SD-1	53.91	1,273.97	141.06
1,170	2/12/2014 SD-1	23.14	368.10	56.45
1,171	2/13/2014 SD-1	22.90	56.79	33.63
1,172	2/14/2014 SD-1	11.90	303.42	30.83
1,173	2/15/2014 SD-1	1.55	291.52	31.91
1,174	2/16/2014 SD-1	(0.74)	44.72	27.37



1,175	2/17/2014 SD-1	(1.21)	88.57	26.74
1,176	2/18/2014 SD-1	11.30	573.18	33.34
1,177	2/19/2014 SD-1	(1.05)	34.61	23.60
1,178	2/20/2014 SD-1	(1.17)	196.64	32.88
1,179	2/21/2014 SD-1	22.81	64.92	30.22
1,180	2/22/2014 SD-1	8.99	51.81	32.26
1,181	2/23/2014 SD-1	13.67	51.24	30.73
1,182	2/24/2014 SD-1	24.40	549.12	54.46
1,183	2/25/2014 SD-1	21.89	564.13	49.65
1,184	2/26/2014 SD-1	6.72	59.20	31.69
1,185	2/27/2014 SD-1	(15.28)	466.55	35.87
1,186	2/28/2014 SD-1	21.87	38.89	25.93
1,187	3/1/2014 SD-1	4.11	57.79	28.48
1,188	3/2/2014 SD-1	(0.50)	1,082.04	127.36
1,189	3/3/2014 SD-1	43.56	5,281.40	416.55
1,190	3/4/2014 SD-1	24.09	308.75	65.61
1,191	3/5/2014 SD-1	24.26	187.98	48.78
1,192	3/6/2014 SD-1	22.72	58.41	35.47
1,193	3/7/2014 SD-1	24.40	43.12	28.17
1,194	3/8/2014 SD-1	13.81	37.12	27.87
1,195	3/9/2014 SD-1	27.66	186.26	35.33
1,196	3/10/2014 SD-1	21.63	49.67	30.96
1,197	3/11/2014 SD-1	14.57	34.00	26.04
1,198	3/12/2014 SD-1	0.02	83.71	27.34
1,199	3/13/2014 SD-1	18.94	49.90	30.63
1,200	3/14/2014 SD-1	10.59	79.08	30.98
1,201	3/15/2014 SD-1	25.92	76.66	29.71
1,202	3/16/2014 SD-1	7.50	526.44	50.36
1,203	3/17/2014 SD-1	22.10	279.42	37.75
1,204	3/18/2014 SD-1	21.04	33.90	27.54
1,205	3/19/2014 SD-1	9.58	345.55	38.85
1,206	3/20/2014 SD-1	7.00	761.64	55.00
1,207	3/21/2014 SD-1	0.66	55.58	29.36
1,208	3/22/2014 SD-1	7.44	56.25	31.98
1,209	3/23/2014 SD-1	13.65	56.78	30.14
1,210	3/24/2014 SD-1	26.47	46.69	33.73
1,211	3/25/2014 SD-1	24.41	66.97	31.75
1,212	3/26/2014 SD-1	2.46	44.42	28.88
1,213	3/27/2014 SD-1	-	50.11	26.16
1,214	3/28/2014 SD-1	24.56	369.26	36.63
1,215	3/29/2014 SD-1	25.92	36.17	31.98
1,216	3/30/2014 SD-1	13.13	33.23	26.18
1,217	3/31/2014 SD-1	0.51	598.76	55.61
1,218	4/1/2014 SD-1	24.24	81.82	37.44
1,219	4/2/2014 SD-1	24.60	357.84	40.78
1,220	4/3/2014 SD-1	20.23	104.95	33.91
1,221	4/4/2014 SD-1	23.29	39.08	33.59

1,222	4/5/2014 SD-1	23.10	274.24	35.71
1,223	4/6/2014 SD-1	33.47	524.77	58.03
1,224	4/7/2014 SD-1	31.53	926.56	76.73
1,225	4/8/2014 SD-1	22.74	192.42	37.14
1,226	4/9/2014 SD-1	14.51	35.08	30.91
1,227	4/10/2014 SD-1	(0.26)	130.75	34.15
1,228	4/11/2014 SD-1	16.93	88.58	39.27
1,229	4/12/2014 SD-1	25.71	288.51	39.17
1,230	4/13/2014 SD-1	23.54	54.88	31.43
1,231	4/14/2014 SD-1	9.20	69.63	29.19
1,232	4/15/2014 SD-1	21.04	61.54	35.89
1,233	4/16/2014 SD-1	16.52	31.92	26.56
1,234	4/17/2014 SD-1	20.65	284.52	35.80
1,235	4/18/2014 SD-1	26.73	70.26	35.44
1,236	4/19/2014 SD-1	10.51	279.58	35.43
1,237	4/20/2014 SD-1	25.61	84.25	34.72
1,238	4/21/2014 SD-1	21.89	86.87	39.94
1,239	4/22/2014 SD-1	31.90	700.02	78.68
1,240	4/23/2014 SD-1	16.02	59.27	34.16
1,241	4/24/2014 SD-1	20.60	60.68	39.22
1,242	4/25/2014 SD-1	25.63	53.54	34.52
1,243	4/26/2014 SD-1	20.79	236.54	30.83
1,244	4/27/2014 SD-1	22.43	67.49	32.42
1,245	4/28/2014 SD-1	17.78	46.90	34.82
1,246	4/29/2014 SD-1	22.31	474.44	58.93
1,247	4/30/2014 SD-1	9.22	50.65	31.26
1,248	5/1/2014 SD-1	27.11	42.82	32.44
1,249	5/2/2014 SD-1	23.03	61.54	32.78
1,250	5/3/2014 SD-1	15.28	145.00	35.52
1,251	5/4/2014 SD-1	(1.23)	55.56	24.34
1,252	5/5/2014 SD-1	4.87	77.12	35.37
1,253	5/6/2014 SD-1	25.82	68.43	39.53
1,254	5/7/2014 SD-1	22.94	176.92	37.68
1,255	5/8/2014 SD-1	28.24	336.86	48.21
1,256	5/9/2014 SD-1	15.77	58.59	37.29
1,257	5/10/2014 SD-1	19.28	54.63	33.63
1,258	5/11/2014 SD-1	14.27	68.08	30.91
1,259	5/12/2014 SD-1	20.83	58.75	34.07
1,260	5/13/2014 SD-1	16.38	53.62	25.75
1,261	5/14/2014 SD-1	21.05	41.22	28.96
1,262	5/15/2014 SD-1	22.13	47.47	31.61
1,263	5/16/2014 SD-1	17.54	149.46	33.39
1,264	5/17/2014 SD-1	2.21	216.32	46.31
1,265	5/18/2014 SD-1	18.92	36.35	29.37
1,266	5/19/2014 SD-1	12.22	82.34	29.51
1,267	5/20/2014 SD-1	22.28	57.73	32.67
1,268	5/21/2014 SD-1	22.05	84.76	37.42

1,269	5/22/2014 SD-1	20.83	103.23	36.80
1,270	5/23/2014 SD-1	24.91	46.64	31.33
1,271	5/24/2014 SD-1	24.33	104.95	35.28
1,272	5/25/2014 SD-1	24.45	178.35	31.17
1,273	5/26/2014 SD-1	15.31	111.25	29.08
1,274	5/27/2014 SD-1	25.07	34.17	29.76
1,275	5/28/2014 SD-1	26.74	61.03	35.71
1,276	5/29/2014 SD-1	25.47	182.23	44.23
1,277	5/30/2014 SD-1	25.24	367.44	66.98
1,278	5/31/2014 SD-1	26.02	612.17	59.90
1,279	6/1/2014 SD-1	21.43	60.12	32.63
1,280	6/2/2014 SD-1	22.21	64.56	35.44
1,281	6/3/2014 SD-1	23.24	44.91	32.25
1,282	6/4/2014 SD-1	20.76	46.06	32.25
1,283	6/5/2014 SD-1	15.51	45.50	32.80
1,284	6/6/2014 SD-1	25.28	54.57	36.06
1,285	6/7/2014 SD-1	24.13	206.47	43.78
1,286	6/8/2014 SD-1	23.04	65.05	35.31
1,287	6/9/2014 SD-1	23.56	62.98	31.55
1,288	6/10/2014 SD-1	24.97	81.19	37.50
1,289	6/11/2014 SD-1	16.10	77.21	37.23
1,290	6/12/2014 SD-1	24.73	69.27	37.39
1,291	6/13/2014 SD-1	27.13	238.68	41.56
1,292	6/14/2014 SD-1	15.41	44.51	33.18
1,293	6/15/2014 SD-1	7.65	65.68	36.46
1,294	6/16/2014 SD-1	24.38	56.62	36.45
1,295	6/17/2014 SD-1	23.90	69.82	37.93
1,296	6/18/2014 SD-1	27.18	75.51	38.43
1,297	6/19/2014 SD-1	26.21	52.33	37.79
1,298	6/20/2014 SD-1	27.60	89.67	42.54
1,299	6/21/2014 SD-1	28.49	51.06	35.83
1,300	6/22/2014 SD-1	18.24	35.61	30.48
1,301	6/23/2014 SD-1	9.98	53.93	36.39
1,302	6/24/2014 SD-1	23.44	135.30	38.35
1,303	6/25/2014 SD-1	22.97	42.41	30.83
1,304	6/26/2014 SD-1	22.42	45.39	32.86
1,305	6/27/2014 SD-1	23.00	359.78	42.91
1,306	6/28/2014 SD-1	24.51	36.96	31.22
1,307	6/29/2014 SD-1	13.89	187.38	35.98
1,308	6/30/2014 SD-1	24.23	102.01	37.58
1,309	7/1/2014 SD-1	14.64	703.33	46.83
1,310	7/2/2014 SD-1	24.16	53.64	36.07
1,311	7/3/2014 SD-1	26.55	69.14	34.07
1,312	7/4/2014 SD-1	22.10	44.98	29.65
1,313	7/5/2014 SD-1	6.87	37.63	27.97
1,314	7/6/2014 SD-1	-	54.34	30.46
1,315	7/7/2014 SD-1	24.16	63.80	35.62

1,316	7/8/2014 SD-1	24.56	74.21	36.67
1,317	7/9/2014 SD-1	23.86	625.94	56.59
1,318	7/10/2014 SD-1	23.46	52.25	32.90
1,319	7/11/2014 SD-1	24.15	40.31	30.06
1,320	7/12/2014 SD-1	23.60	44.28	31.33
1,321	7/13/2014 SD-1	23.64	322.33	44.10
1,322	7/14/2014 SD-1	24.35	50.55	34.56
1,323	7/15/2014 SD-1	25.79	40.81	30.90
1,324	7/16/2014 SD-1	25.17	41.71	31.52
1,325	7/17/2014 SD-1	22.63	40.98	30.04
1,326	7/18/2014 SD-1	25.36	35.59	29.26
1,327	7/19/2014 SD-1	22.37	34.91	27.82
1,328	7/20/2014 SD-1	20.28	74.56	31.71
1,329	7/21/2014 SD-1	22.59	362.92	48.69
1,330	7/22/2014 SD-1	24.38	87.97	37.69
1,331	7/23/2014 SD-1	23.49	52.38	34.89
1,332	7/24/2014 SD-1	22.24	47.10	31.61
1,333	7/25/2014 SD-1	17.17	54.02	33.20
1,334	7/26/2014 SD-1	21.14	74.91	35.12
1,335	7/27/2014 SD-1	21.49	180.15	39.46
1,336	7/28/2014 SD-1	25.02	56.74	34.01
1,337	7/29/2014 SD-1	23.23	70.09	33.70
1,338	7/30/2014 SD-1	13.21	96.52	35.08
1,339	7/31/2014 SD-1	23.67	636.83	73.72
1,340	8/1/2014 SD-1	25.22	41.02	31.32
1,341	8/2/2014 SD-1	24.00	39.63	28.97
1,342	8/3/2014 SD-1	21.17	105.98	32.85
1,343	8/4/2014 SD-1	21.82	626.44	46.10
1,344	8/5/2014 SD-1	23.37	74.86	36.54
1,345	8/6/2014 SD-1	23.25	354.92	45.70
1,346	8/7/2014 SD-1	22.82	158.71	45.51
1,347	8/8/2014 SD-1	23.91	117.72	41.69
1,348	8/9/2014 SD-1	24.09	44.15	34.33
1,349	8/10/2014 SD-1	22.46	45.76	33.24
1,350	8/11/2014 SD-1	26.03	287.80	41.62
1,351	8/12/2014 SD-1	26.32	54.58	35.09
1,352	8/13/2014 SD-1	23.05	73.41	34.45
1,353	8/14/2014 SD-1	21.71	45.46	31.89
1,354	8/15/2014 SD-1	21.60	86.24	33.55
1,355	8/16/2014 SD-1	22.91	59.80	33.27
1,356	8/17/2014 SD-1	22.06	34.52	27.91
1,357	8/18/2014 SD-1	23.54	40.37	30.70
1,358	8/19/2014 SD-1	20.65	71.38	30.41
1,359	8/20/2014 SD-1	23.78	629.25	51.50
1,360	8/21/2014 SD-1	23.10	121.32	35.72
1,361	8/22/2014 SD-1	22.63	77.44	34.44
1,362	8/23/2014 SD-1	22.63	61.95	33.52

1,363	8/24/2014 SD-1	22.07	286.84	40.58
1,364	8/25/2014 SD-1	24.48	258.82	74.74
1,365	8/26/2014 SD-1	25.05	140.67	37.67
1,366	8/27/2014 SD-1	24.75	78.23	34.96
1,367	8/28/2014 SD-1	22.91	75.06	33.73
1,368	8/29/2014 SD-1	23.87	62.95	34.03
1,369	8/30/2014 SD-1	23.77	483.71	48.38
1,370	8/31/2014 SD-1	21.98	39.53	28.36
1,371	9/1/2014 SD-1	21.88	53.94	31.14
1,372	9/2/2014 SD-1	23.96	45.24	33.29
1,373	9/3/2014 SD-1	24.41	58.21	33.32
1,374	9/4/2014 SD-1	24.01	44.59	31.88
1,375	9/5/2014 SD-1	21.64	49.40	34.22
1,376	9/6/2014 SD-1	24.84	51.14	31.27
1,377	9/7/2014 SD-1	24.97	35.30	28.58
1,378	9/8/2014 SD-1	23.28	60.13	32.47
1,379	9/9/2014 SD-1	22.79	228.60	52.52
1,380	9/10/2014 SD-1	24.09	141.52	41.64
1,381	9/11/2014 SD-1	26.60	81.87	37.74
1,382	9/12/2014 SD-1	19.36	98.63	31.02
1,383	9/13/2014 SD-1	20.93	29.11	24.59
1,384	9/14/2014 SD-1	22.20	45.98	26.19
1,385	9/15/2014 SD-1	23.64	46.19	32.95
1,386	9/16/2014 SD-1	28.80	66.94	39.66
1,387	9/17/2014 SD-1	25.49	49.56	34.27
1,388	9/18/2014 SD-1	24.39	44.89	32.98
1,389	9/19/2014 SD-1	24.99	49.61	34.00
1,390	9/20/2014 SD-1	25.01	319.03	47.33
1,391	9/21/2014 SD-1	24.47	353.42	54.91
1,392	9/22/2014 SD-1	24.85	277.34	36.70
1,393	9/23/2014 SD-1	21.68	52.37	28.29
1,394	9/24/2014 SD-1	2.02	64.50	28.49
1,395	9/25/2014 SD-1	24.41	42.90	29.54
1,396	9/26/2014 SD-1	24.12	48.67	30.85
1,397	9/27/2014 SD-1	24.90	31.70	27.30
1,398	9/28/2014 SD-1	23.76	48.41	29.36
1,399	9/29/2014 SD-1	23.42	43.21	30.65
1,400	9/30/2014 SD-1	15.49	51.16	29.88
1,401	10/1/2014 SD-1	23.53	167.60	40.08
1,402	10/2/2014 SD-1	24.87	154.30	50.60
1,403	10/3/2014 SD-1	26.51	53.16	31.28
1,404	10/4/2014 SD-1	22.69	96.75	30.93
1,405	10/5/2014 SD-1	19.28	335.10	56.20
1,406	10/6/2014 SD-1	23.45	67.71	36.58
1,407	10/7/2014 SD-1	10.45	240.96	38.85
1,408	10/8/2014 SD-1	23.54	97.42	33.49
1,409	10/9/2014 SD-1	22.70	66.52	32.68

1,410	10/10/2014 SD-1	23.51	58.18	35.66
1,411	10/11/2014 SD-1	24.95	31.46	28.44
1,412	10/12/2014 SD-1	11.42	28.30	24.60
1,413	10/13/2014 SD-1	22.23	330.37	36.04
1,414	10/14/2014 SD-1	23.57	65.41	29.33
1,415	10/15/2014 SD-1	11.73	311.01	33.13
1,416	10/16/2014 SD-1	(0.98)	68.03	24.35
1,417	10/17/2014 SD-1	7.01	390.42	36.36
1,418	10/18/2014 SD-1	23.19	142.46	40.81
1,419	10/19/2014 SD-1	23.22	47.56	29.01
1,420	10/20/2014 SD-1	20.59	177.15	38.35
1,421	10/21/2014 SD-1	21.64	58.95	30.15
1,422	10/22/2014 SD-1	21.31	36.88	27.90
1,423	10/23/2014 SD-1	23.14	46.30	30.02
1,424	10/24/2014 SD-1	20.65	78.34	30.94
1,425	10/25/2014 SD-1	12.73	62.08	28.81
1,426	10/26/2014 SD-1	1.10	33.19	20.80
1,427	10/27/2014 SD-1	(0.21)	59.53	25.62
1,428	10/28/2014 SD-1	14.75	568.72	36.18
1,429	10/29/2014 SD-1	20.60	46.61	28.37
1,430	10/30/2014 SD-1	10.21	132.70	27.58
1,431	10/31/2014 SD-1	22.12	32.56	27.32
1,432	11/1/2014 SD-1	(0.48)	27.06	21.15
1,433	11/2/2014 SD-1	(0.05)	26.88	17.71
1,434	11/3/2014 SD-1	-	41.61	21.84
1,435	11/4/2014 SD-1	20.07	1,273.85	54.62
1,436	11/5/2014 SD-1	24.42	267.93	36.59
1,437	11/6/2014 SD-1	23.51	34.11	27.39
1,438	11/7/2014 SD-1	23.25	34.29	25.70
1,439	11/8/2014 SD-1	8.97	36.68	25.29
1,440	11/9/2014 SD-1	0.96	30.03	23.02
1,441	11/10/2014 SD-1	(0.79)	28.12	20.68
1,442	11/11/2014 SD-1	(0.43)	50.12	22.62
1,443	11/12/2014 SD-1	14.10	38.22	28.10
1,444	11/13/2014 SD-1	24.41	1,105.37	106.19
1,445	11/14/2014 SD-1	28.50	114.93	41.20
1,446	11/15/2014 SD-1	24.69	38.41	28.12
1,447	11/16/2014 SD-1	25.04	77.13	35.57
1,448	11/17/2014 SD-1	27.15	80.58	39.33
1,449	11/18/2014 SD-1	22.67	41.89	28.00
1,450	11/19/2014 SD-1	25.63	496.33	40.05
1,451	11/20/2014 SD-1	21.55	95.30	31.06
1,452	11/21/2014 SD-1	22.96	524.14	52.33
1,453	11/22/2014 SD-1	15.21	527.23	39.31
1,454	11/23/2014 SD-1	9.85	33.76	23.24
1,455	11/24/2014 SD-1	20.89	312.07	40.17
1,456	11/25/2014 SD-1	20.81	40.81	28.40

1,457	11/26/2014 SD-1	21.80	32.97	26.12
1,458	11/27/2014 SD-1	21.16	38.78	28.35
1,459	11/28/2014 SD-1	(0.49)	28.72	21.96
1,460	11/29/2014 SD-1	(0.95)	25.21	14.10
1,461	11/30/2014 SD-1	(0.99)	320.11	25.77
1,462	12/1/2014 SD-1	(0.98)	305.70	35.23
1,463	12/2/2014 SD-1	23.62	49.45	29.01
1,464	12/3/2014 SD-1	20.76	58.67	26.18
1,465	12/4/2014 SD-1	20.86	264.32	26.56
1,466	12/5/2014 SD-1	12.66	521.37	30.67
1,467	12/6/2014 SD-1	19.92	28.22	23.98
1,468	12/7/2014 SD-1	20.38	31.59	24.27
1,469	12/8/2014 SD-1	21.63	36.57	24.82
1,470	12/9/2014 SD-1	21.76	85.25	28.72
1,471	12/10/2014 SD-1	22.03	503.77	31.88
1,472	12/11/2014 SD-1	21.90	31.98	26.39
1,473	12/12/2014 SD-1	21.06	40.06	25.18
1,474	12/13/2014 SD-1	3.42	27.53	22.17
1,475	12/14/2014 SD-1	(0.65)	540.81	28.24
1,476	12/15/2014 SD-1	4.32	33.83	22.91
1,477	12/16/2014 SD-1	20.83	65.32	25.81
1,478	12/17/2014 SD-1	22.42	97.13	26.47
1,479	12/18/2014 SD-1	24.52	280.51	36.57
1,480	12/19/2014 SD-1	23.18	65.39	28.77
1,481	12/20/2014 SD-1	21.60	28.18	23.49
1,482	12/21/2014 SD-1	19.85	24.72	21.72
1,483	12/22/2014 SD-1	6.00	30.28	21.76
1,484	12/23/2014 SD-1	16.23	25.21	20.67
1,485	12/24/2014 SD-1	16.09	22.44	19.09
1,486	12/25/2014 SD-1	(0.42)	23.49	14.83
1,487	12/26/2014 SD-1	(0.93)	23.93	14.14
1,488	12/27/2014 SD-1	3.29	398.04	31.79
1,489	12/28/2014 SD-1	18.88	78.51	23.39
1,490	12/29/2014 SD-1	18.65	24.73	21.78
1,491	12/30/2014 SD-1	17.83	33.46	22.87
1,492	12/31/2014 SD-1	21.64	55.10	26.57
1,493	1/1/2015 SD-1	22.08	30.49	25.24
1,494	1/2/2015 SD-1	20.83	29.46	24.49
1,495	1/3/2015 SD-1	18.57	28.86	22.97
1,496	1/4/2015 SD-1	19.35	23.92	21.65
1,497	1/5/2015 SD-1	17.97	115.53	22.67
1,498	1/6/2015 SD-1	19.99	27.83	22.58
1,499	1/7/2015 SD-1	13.23	28.59	20.65
1,500	1/8/2015 SD-1	23.46	125.51	28.41
1,501	1/9/2015 SD-1	20.79	64.36	26.90
1,502	1/10/2015 SD-1	17.38	32.90	25.00
1,503	1/11/2015 SD-1	(53.97)	39.17	22.48

1,504	1/12/2015 SD-1	18.36	284.47	29.01
1,505	1/13/2015 SD-1	21.29	238.14	34.30
1,506	1/14/2015 SD-1	21.75	90.99	25.82
1,507	1/15/2015 SD-1	21.52	30.82	24.44
1,508	1/16/2015 SD-1	20.23	495.61	36.42
1,509	1/17/2015 SD-1	5.61	27.58	20.79
1,510	1/18/2015 SD-1	17.25	23.89	20.65
1,511	1/19/2015 SD-1	17.47	27.62	22.38
1,512	1/20/2015 SD-1	7.09	27.34	20.81
1,513	1/21/2015 SD-1	3.44	24.50	19.88
1,514	1/22/2015 SD-1	(0.89)	28.79	19.37
1,515	1/23/2015 SD-1	19.29	31.48	22.66
1,516	1/24/2015 SD-1	17.78	24.57	20.63
1,517	1/25/2015 SD-1	16.93	25.01	19.74
1,518	1/26/2015 SD-1	17.46	57.48	21.50
1,519	1/27/2015 SD-1	16.50	28.26	21.09
1,520	1/28/2015 SD-1	5.38	115.13	21.00
1,521	1/29/2015 SD-1	15.26	23.66	19.33
1,522	1/30/2015 SD-1	17.66	237.12	24.43
1,523	1/31/2015 SD-1	17.22	23.26	19.67
1,524	2/1/2015 SD-1	13.66	20.15	17.03
1,525	2/2/2015 SD-1	15.02	136.80	24.96
1,526	2/3/2015 SD-1	16.16	586.91	25.71
1,527	2/4/2015 SD-1	16.08	30.92	21.02
1,528	2/5/2015 SD-1	16.60	133.65	30.04
1,529	2/6/2015 SD-1	17.64	93.82	21.41
1,530	2/7/2015 SD-1	14.02	27.35	20.29
1,531	2/8/2015 SD-1	0.07	1,553.06	38.78
1,532	2/9/2015 SD-1	3.60	21.80	18.58
1,533	2/10/2015 SD-1	(0.19)	24.40	16.63
1,534	2/11/2015 SD-1	1.64	19.78	15.07
1,535	2/12/2015 SD-1	17.27	27.93	21.63
1,536	2/13/2015 SD-1	18.83	25.23	21.82
1,537	2/14/2015 SD-1	(0.21)	23.64	18.87
1,538	2/15/2015 SD-1	(0.81)	19.07	12.48
1,539	2/16/2015 SD-1	(0.25)	67.23	24.51
1,540	2/17/2015 SD-1	17.71	44.58	22.45
1,541	2/18/2015 SD-1	18.92	291.10	24.52
1,542	2/19/2015 SD-1	15.25	48.88	19.48
1,543	2/20/2015 SD-1	12.12	23.22	19.64
1,544	2/21/2015 SD-1	(0.89)	31.45	18.82
1,545	2/22/2015 SD-1	17.53	32.50	21.72
1,546	2/23/2015 SD-1	20.62	235.35	33.60
1,547	2/24/2015 SD-1	23.80	63.46	29.85
1,548	2/25/2015 SD-1	19.32	29.98	22.98
1,549	2/26/2015 SD-1	17.63	34.48	22.41
1,550	2/27/2015 SD-1	20.97	118.68	32.72



1,551	2/28/2015 SD-1	29.39	849.07	124.42
1,552	3/1/2015 SD-1	25.24	641.82	111.25
1,553	3/2/2015 SD-1	23.90	521.45	52.20
1,554	3/3/2015 SD-1	20.55	206.41	28.87
1,555	3/4/2015 SD-1	18.73	29.33	21.98
1,556	3/5/2015 SD-1	23.13	36.78	28.87
1,557	3/6/2015 SD-1	19.34	38.85	24.00
1,558	3/7/2015 SD-1	16.07	25.44	20.35
1,559	3/8/2015 SD-1	14.75	24.56	20.23
1,560	3/9/2015 SD-1	19.72	67.64	26.51
1,561	3/10/2015 SD-1	19.19	97.45	29.12
1,562	3/11/2015 SD-1	18.40	32.85	22.53
1,563	3/12/2015 SD-1	18.24	47.78	22.49
1,564	3/13/2015 SD-1	18.01	24.42	20.20
1,565	3/14/2015 SD-1	17.14	25.24	19.60
1,566	3/15/2015 SD-1	18.55	34.29	21.63
1,567	3/16/2015 SD-1	15.34	28.37	20.44
1,568	3/17/2015 SD-1	1.46	273.26	23.62
1,569	3/18/2015 SD-1	18.19	28.67	23.03
1,570	3/19/2015 SD-1	15.04	25.90	21.53
1,571	3/20/2015 SD-1	(0.21)	47.72	23.12
1,572	3/21/2015 SD-1	19.95	166.70	28.01
1,573	3/22/2015 SD-1	19.13	39.62	22.89
1,574	3/23/2015 SD-1	(0.57)	32.74	21.35
1,575	3/24/2015 SD-1	(0.40)	74.67	21.77
1,576	3/25/2015 SD-1	(0.29)	80.43	20.95
1,577	3/26/2015 SD-1	11.13	62.52	21.86
1,578	3/27/2015 SD-1	-	104.73	22.26
1,579	3/28/2015 SD-1	(0.84)	30.40	17.62
1,580	3/29/2015 SD-1	(0.40)	22.90	15.55
1,581	3/30/2015 SD-1	17.81	705.56	39.70
1,582	3/31/2015 SD-1	8.14	68.56	25.59
1,583	4/1/2015 SD-1	16.07	348.83	33.32
1,584	4/2/2015 SD-1	17.32	33.86	22.08
1,585	4/3/2015 SD-1	14.43	156.98	23.00
1,586	4/4/2015 SD-1	17.57	24.79	20.67
1,587	4/5/2015 SD-1	17.71	20.89	19.21
1,588	4/6/2015 SD-1	0.21	25.28	19.03
1,589	4/7/2015 SD-1	16.60	345.19	40.10
1,590	4/8/2015 SD-1	15.55	607.26	71.31
1,591	4/9/2015 SD-1	-	37.44	22.90
1,592	4/10/2015 SD-1	17.20	33.49	22.03
1,593	4/11/2015 SD-1	14.62	23.57	19.63
1,594	4/12/2015 SD-1	11.06	295.66	26.66
1,595	4/13/2015 SD-1	10.41	511.12	43.67
1,596	4/14/2015 SD-1	18.02	60.42	23.75
1,597	4/15/2015 SD-1	16.50	30.05	21.36

1,598	4/16/2015 SD-1	17.84	348.86	29.58
1,599	4/17/2015 SD-1	17.25	51.39	24.40
1,600	4/18/2015 SD-1	17.91	84.66	24.71
1,601	4/19/2015 SD-1	9.69	37.33	22.71
1,602	4/20/2015 SD-1	16.62	26.24	21.50
1,603	4/21/2015 SD-1	16.78	118.52	26.69
1,604	4/22/2015 SD-1	-	112.97	23.56
1,605	4/23/2015 SD-1	18.51	26.04	22.36
1,606	4/24/2015 SD-1	17.38	33.48	22.29
1,607	4/25/2015 SD-1	3.13	27.31	19.33
1,608	4/26/2015 SD-1	7.87	27.81	20.32
1,609	4/27/2015 SD-1	17.99	31.55	22.51
1,610	4/28/2015 SD-1	8.59	26.21	18.40
1,611	4/29/2015 SD-1	16.75	273.99	27.59
1,612	4/30/2015 SD-1	7.64	421.85	40.11
1,613	5/1/2015 SD-1	9.49	69.32	25.19
1,614	5/2/2015 SD-1	1.87	171.16	23.36
1,615	5/3/2015 SD-1	1.12	29.59	19.49
1,616	5/4/2015 SD-1	15.22	28.49	22.02
1,617	5/5/2015 SD-1	17.75	34.70	23.73
1,618	5/6/2015 SD-1	17.99	46.21	24.18
1,619	5/7/2015 SD-1	18.66	96.35	26.37
1,620	5/8/2015 SD-1	17.54	265.09	25.87
1,621	5/9/2015 SD-1	13.50	158.31	28.08

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**Source Documents**

SD-1              ERCOT Data\_AEN Zone.xlsx

## Financial Policies – 2014-15

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# **CITY OF AUSTIN, TEXAS**

## **FINANCIAL POLICIES**

Prepared by  
Financial Services Department

# Financial Policies – 2014-15

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## OVERVIEW OF FINANCIAL POLICIES

In June 1989, the City Council developed financial policies to ensure that the City's financial resources are managed in a prudent manner. These policies are reviewed annually for compliance. Changes and additions to these policies are approved by Council from time to time.

There is one change to the financial policies from the previous year which was approved on April 10, 2014. Council amended General Fund Financial Policy #3 revising the conditions under which mid-year budget amendments would be considered by City Council.

The City of Austin is in compliance with 95 of the 99 financial policies, as approved. Unless otherwise noted, the FY 2013-14 Budget has been used to determine the current status of the financial policies.

For example, the City:

- Prepared a 5-year financial forecast for fiscal years 2014-15 through 2018-19;
- Maintained reserves in the General Fund and General Obligation Debt Service Fund at designated levels; and,
- Managed the City's investment portfolio in alignment with the policies governing capital preservation, liquidity, asset security, portfolio diversification and return on investment.

The City is not currently in compliance with:

- General Obligation Debt Service Policy #7: In FY12, the City conducted a bond election with 4 years of authorized unissued bonds remaining;
- Austin Energy Policy #11: Austin Energy does not have operating cash equivalent to 45 days of budgeted operations and maintenance expense, less fuel, as recommended by the policy;
- Austin Energy Policy #16: Austin Energy's emergency reserve has been met. However, the contingency reserve was drawn down by \$24,750,000 in FY 2012 and replenishment will not begin until FY 2015, which is past the two year time-frame set in the policy; and,
- Austin Water Utility Policy #11: The calculated quick ratio (Current Assets less inventory divided by Current Liabilities) is 1.37 as of September 30, 2012, instead of the minimum 1.50 prescribed in the policy.

# Financial Policies – 2014-15

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Policy	Current Status
<b>Austin Energy Financial Policies</b>	
1. The term of debt generally shall not exceed the useful life of the asset, and in no case shall the term exceed 30 years.	In compliance.
2. Capitalized interest shall only be considered during the construction phase of a new facility if the construction period exceeds 7 years. The time frame for capitalizing interest may be 3 years but not more than 5 years. Council approval shall be obtained before proceeding with a financing that includes capitalized interest.	N/A
3. Principal repayment delays shall be 1 to 3 years, but shall not exceed 5 years.	In compliance.
4. Austin Energy shall maintain either bond insurance policies or surety bonds issued by highly rated ("AAA") bond insurance companies or a funded debt service reserve or a combination of both for its existing revenue bond issues, in accordance with the Combined Utility Systems Revenue Bond Covenant.	In compliance.
5. A debt service reserve fund shall not be required to be established or maintained for the Parity Electric System Obligations so long as the "Pledged Net Revenues" of the System remaining after deducting the amounts expended for the Annual Debt Service Requirements for Prior First Lien and Prior Subordinate Lien Obligations is equal to or exceeds one hundred fifty per cent (150%) of the Annual Debt Service Requirements of the Parity Electric Utility Obligations. If the "Pledged Net Revenues" do not equal or exceed one hundred fifty per cent (150%) of the Annual Debt Service Requirements of the Parity Electric Utility Obligations, then a debt service reserve fund shall be established and maintained in accordance with the Supplemental Ordinance for such Parity Electric System Obligations.	In compliance.
6. Debt service coverage of a minimum of 2.0x shall be targeted for the Electric Utility Bonds. All short-term debt, including commercial paper, and non-revenue obligations will be included at 1.0x.	In compliance. Debt service coverage (DSC) for the FY 2014-15 Budget is 3.21x.
7. Short-term debt, including commercial paper, shall be used when authorized for interim financing of capital projects and fuel and materials inventories. The term of short-term debt will not exceed 5 years. Both Tax-Exempt and Taxable commercial paper may be issued in order to comply with the Internal Revenue Service Rules and Regulations applicable to Austin Energy. Total short-term debt shall generally not exceed 20% of outstanding long-term debt.	In compliance.
8. Commercial paper may be used to finance capital improvements required for normal business operation for Electric System additions, extensions, and improvements or improvements to comply with local, state and federal mandates or regulations. However, this shall not apply to new nuclear generation units or conventional coal generation units.	In compliance.

## Financial Policies – 2014-15

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Policy	Current Status
Commercial paper will be converted to refunding bonds when dictated by economic and business conditions. Both Tax-Exempt and Taxable refunding bonds may be issued in order to comply with the Internal Revenue Service Rules and Regulations applicable to Austin Energy.	
Commercial paper may be used to finance voter approved revenue bond projects before the commercial paper is converted to refunding bonds.	
9. Ongoing routine, preventive maintenance should be funded on a pay-as-you-go basis.	In compliance.
10. Austin Energy shall maintain a minimum quick ratio of 1.50 (current assets less inventory divided by current liabilities). The source of this information should be the Comprehensive Annual Financial Report.	In compliance.
11. Austin Energy shall maintain operating cash equivalent to 45 days of budgeted operations and maintenance expense, less fuel.	In compliance
12. Net Revenue generated by Austin Energy shall be used for General Fund transfers, capital investment, repair and replacement, debt management, competitive strategies, and other Austin Energy requirements such as working capital.	In compliance.
13. The General Fund transfer shall not exceed 12% of Austin Energy three-year average revenues, calculated using the current year estimate and the previous two years' actual revenues from the City's Comprehensive Annual Financial Report.	In compliance.
14. Capital projects should be financed through a combination of cash, referred to as pay-as-you-go financing (equity contributions from current revenues), and debt. An equity contribution ratio between 35% and 60% is desirable.	In compliance.
15. A Repair and Replacement Fund shall be created and established. Moneys on deposit in the Repair and Replacement Fund shall be used for providing extensions, additions, replacements and improvements to the Electric System. Net revenues available after meeting the General Fund Transfer, capital investment (equity contributions from current revenues) and 45 days of working capital may be deposited in the Repair and Replacement Fund. The targeted balance shall not exceed 50% of the previous year's electric utility depreciation expense, which is at a level necessary to keep the electric system in good operating condition or to prevent a loss of revenues.	In compliance.
16. A Strategic Reserve Fund shall be created and established, replacing the Debt Management Fund. It will have three components:	In Compliance by the end of FY 2014-15.
· An Emergency Reserve with a minimum of 60 days of non-power supply operating requirements.	
· Up to a maximum of 60 days additional non-power supply operating requirements set aside as a Contingency Reserve.	

# Financial Policies – 2014-15

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<b>Policy</b>	<b>Current Status</b>
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- Any additional funds over the maximum 120 days of non-power supply operating requirements may be set aside in a Rate Stabilization Reserve.

The Emergency Reserve shall only be used as a last resort to provide funding in the event of an unanticipated or unforeseen extraordinary need of an emergency nature, such as costs related to a natural disaster, emergency or unexpected costs created by Federal or State legislation. The Emergency Reserve shall be used only after the Contingency Reserve has been exhausted.

The Contingency Reserve shall be used for unanticipated or unforeseen events that reduce revenue or increase obligations such as extended unplanned plant outages, insurance deductibles, unexpected costs created by Federal or State legislation, and liquidity support for unexpected changes in fuel costs or purchased power which stabilizes fuel rates for Austin Energy customers.

In the event any portion of the Contingency Reserve is used, the balance will be replenished to the targeted amount within two (2) years.

A Rate Stabilization Reserve shall be created and established, replacing the Competitive Reserve in FY 2011-12, for the purpose of stabilizing electric utility rates in future periods. The Rate Stabilization Reserve may provide funding for: (1) deferring or minimizing future rate increases, (2) new generation capacity construction and acquisition costs and (3) balancing of annual power supply costs (net power supply/energy settlement cost). The balance shall not exceed 90 days of net power supply costs.

Funding may be provided from net revenue available after meeting the General Fund Transfer, capital investment (equity contributions from current revenue), Repair and Replacement Fund, and 45 days of working capital.

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|---|-----------------------|
| <p>17. Electric rates shall be designed to generate sufficient revenue, after consideration of interest income and miscellaneous revenue, to support (1) the full cost (direct and indirect) of operations including depreciation, (2) debt service, (3) General Fund transfer, (4) equity funding of capital investments, (5) requisite deposits of all reserve accounts, (6) sufficient annual debt service requirements of the Parity Electric Utility Obligations and other bond covenant requirements, if applicable, and (7) any other current obligations. In addition, Austin Energy may recommend to Council in the budget directing excess net revenues for General Fund transfers, capital investment, repair and replacement, debt management, competitive strategies and other Austin Energy requirements such as working capital.</p> | <p>In compliance.</p> |
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In addition to these requirements, electric rates shall be designed to generate sufficient revenue, after consideration of interest income and miscellaneous revenue, to ensure a minimum debt service coverage of 2.0x on electric utility revenue bonds.

## Financial Policies – 2014-15

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Policy	Current Status
A rate adequacy review shall be completed every five years, at a minimum, through performing a cost of service study.	
18. A decommissioning trust shall be established external to the City to hold the proceeds for moneys collected for the purpose of decommissioning the South Texas Nuclear Project. An external investment manager may be hired to administer the trust investments.	In compliance.
19. The master ordinance of the Parity Electric System Obligations does not require a debt service reserve fund. Austin Energy will maintain a minimum of unrestricted cash on hand equal to six months debt service for the then outstanding Parity Electric System Obligations.	In compliance.
20. Current revenue, which does not include the beginning balance, will be sufficient to support current expenditures (defined as "structural balance"). However, if projected revenue in future years is not sufficient to support projected requirements, ending balance may be budgeted to achieve structural balance.	In compliance.
21. A Non-Nuclear Plant Decommissioning Fund shall be established to fund plant retirement. The amount set aside will be based on a decommissioning study of the plant site. Funding will be set aside over a minimum of four (4) years prior to the expected plant closure.	In compliance.



1.	The term of debt generally shall not exceed the useful life of the asset, and in no case shall the term exceed 30 years.	In compliance.	Reasoning AE has no long term bonds for over 30 years per bond covenants.
2.	Capitalized interest shall only be considered during the construction phase of a new facility if the construction period exceeds 7 years. The time frame for capitalizing interest may be 3 years but not more than 5 years. Council	N/A	No financing using capitalized interest is proposed or currently in use.
3.	Principal repayment delays shall be 1 to 3 years, but shall not exceed 5 years.	In compliance.	Per bond covenants, in compliance
4.	Austin Energy shall maintain either bond insurance policies or surety bonds issued by highly rated ("AAA") bond insurance companies or a funded debt service reserve or a combination of both for its existing revenue bond issues, in accordance with the Combined Utility Systems Revenue	In compliance.	No "AAA" rated bond insurance companies exist but AE put up \$44M to fund a debt service reserve in FY 2010.

- |    |  |  |   |
|----|--|--|---|
| 5. | A debt service reserve fund shall not be required to be established or maintained for the Parity Electric System Obligations so long as the "Pledged Net Revenues" of the System remaining after deducting the amounts expended for the Annual Debt Service Requirements for Prior First Lien and Prior Subordinate Lien Obligations is equal to or exceeds one hundred fifty per cent (150%) of the Annual Debt Service Requirements of the Parity Electric Utility Obligations. If the "Pledged Net Revenues" do not equal or exceed one hundred fifty per cent (150%) of the Annual Debt Service Requirements of the Parity Electric Utility Obligations, then a debt service reserve fund shall be established and maintained in accordance with the Supplemental Ordinance for such Parity Electric System Obligations. | In compliance.   |   |
| 6. | Debt service coverage of a minimum of 2.0x shall be targeted for the Electric Utility Bonds. All short-term debt, including commercial paper, and non-revenue obligations will be included at 1.0x.  | In compliance. Debt service coverage (DSC) for the FY 2014-15 Budget is 3.21x. |   |
| 7. | Short-term debt, including commercial paper, shall be used when authorized for interim financing of capital projects and fuel and materials inventories. The term of short-term debt will not exceed 5 years. Both Tax-Exempt and Taxable commercial paper may be issued in order to comply with the Internal Revenue Service Rules and Regulations applicable to Austin Energy. Total short-term debt shall generally not exceed 20% of outstanding long-term debt.   | In compliance.   |   |
| 8. | Commercial paper may be used to finance capital improvements required for normal business operation for Electric System additions, extensions, and improvements or improvements to comply with local, state and federal mandates or regulations. However, this shall not apply to new nuclear generation units or conventional coal generation units.  | In compliance.   | Funding sources for STP is 100% cash. Funding source for FPP is 100% cash. No new nuclear generation units or coal generation units in the FY 2015 Proposed Budget. |
|    | Commercial paper will be converted to refunding bonds when dictated by economic and business conditions. Both Tax-Exempt and Taxable refunding bonds may be issued in order to comply with the Internal Revenue Service Rules and  |  | AE will convert commercial paper when limit of \$200M authority is met to long term debt.   |

	Commercial paper may be used to finance voter approved revenue bond projects before the commercial paper is converted to refunding bonds.		No voter approved revenue bond projects in FY 2015
9.	Ongoing routine, preventive maintenance should be funded on a pay-as-you-go basis.	In compliance.	All O&M paid with current revenue.
10.	Austin Energy shall maintain a minimum quick ratio of 1.50 (current assets less inventory divided by current liabilities). The source of this information should be the Comprehensive Annual Financial Report.	In compliance.	Ratio 2.29 see calculation to the right.
11.	Austin Energy shall maintain operating cash equivalent to 45 days of budgeted operations and maintenance expense, less fuel.	In compliance	See calculation below. Projecting 110 days cash on hand.
12.	Net Revenue generated by Austin Energy shall be used for General Fund transfers, capital investment, repair and replacement, debt management, competitive strategies, and other Austin Energy requirements such as working capital.	In compliance.	See fund summary.
13.	The General Fund transfer shall not exceed 12% of Austin Energy three-year average revenues, calculated using the current year estimate and the previous two years' actual revenues from the City's Comprehensive Annual Financial Report.	In compliance.	GFT calculated on 12% on non fuel revenue as per Council direction with floor of \$105M. See below for calculation
14.	Capital projects should be financed through a combination of cash, referred to as pay-as-you-go financing (equity contributions from current revenues), and debt. An equity contribution ratio between 35% and 60% is desirable.	In compliance.	Equity Contribution 41.7% for FY 2015. See Calculation below
15.	A Repair and Replacement Fund shall be created and established. Moneys on deposit in the Repair and	In compliance.	Fund is established. AE will not deposit funds in FY 15.
16.	A Strategic Reserve Fund shall be created and established, replacing the Debt Management Fund. It will have three  An Emergency Reserve with a minimum of 60 days of non-power supply operating requirements.	In Compliance by the end of FY 2014-15.	\$90,000,000 is available in the fund. See Fund Summary below

Up to a maximum of 60 days additional non-power supply operating requirements set aside as a Contingency Reserve.

\$88,000,000 will be available in the Fund by end of FY 15.

Any additional funds over the maximum 120 days of non-power supply operating requirements may be set aside in a

No additional over 120 days is available

The Emergency Reserve shall only be used as a last resort to provide funding in the event of an unanticipated or unforeseen extraordinary need of an emergency nature, such as costs related to a natural disaster, emergency or unexpected costs created by Federal or State legislation. The Emergency Reserve shall be used only after the Contingency Reserve has been exhausted.

The Contingency Reserve shall be used for unanticipated or unforeseen events that reduce revenue or increase obligations such as extended unplanned plant outages, insurance deductibles, unexpected costs created by Federal or State legislation, and liquidity support for unexpected changes in fuel costs or purchased power which stabilizes fuel rates for Austin Energy customers.

	In the event any portion of the Contingency Reserve is used, the balance will be replenished to the targeted amount		Amounts used replenished by end of FY 15
	A Rate Stabilization Reserve shall be created and established, replacing the Competitive Reserve in FY 2011-12, for the		This will not be established until FY 2016.
	Funding may be provided from net revenue available after meeting the General Fund Transfer, capital investment (equity contributions from current revenue), Repair and Replacement Fund. and 45 days of working capital.		45 days of working capital = \$70 million. AE's working capital is projected at 110 days.
17.	Electric rates shall be designed to generate sufficient revenue, after consideration of interest income and	In compliance.	Please see fund summary #12 and DSC for #6
	In addition to these requirements, electric rates shall be designed to generate sufficient revenue, after consideration of interest income and miscellaneous revenue, to ensure a minimum debt service coverage of 2.0x on electric utility revenue bonds.		Please see fund summary #12 and DSC for #6
	A rate adequacy review shall be completed every five years, at a minimum, through performing a cost of service study.		Cost of service to be conducted in FY 2015. Last one done in FY 2011 for rate review.
18.	A decommissioning trust shall be established external to the	In compliance.	See below for CAFR Note
19.	The master ordinance of the Parity Electric System	In compliance.	See #19 Backup tab
20.	Current revenue, which does not include the beginning	In compliance.	See Fund Summary # 12
21.	A Non-Nuclear Plant Decommissioning Fund shall be established to fund plant retirement. The amount set aside will be based on a decommissioning study of the plant site. Funding will be set aside over a minimum of four (4) years prior to the expected plant closure.	In compliance.	Fund not set up. Non-nuclear plants not expected to be decommissioned in next 4 years.

## #12 Fund Summary

	2011-12 ACTUAL	2012-13 ACTUAL	2013-14 AMENDED	2013-14 ESTIMATED	2014-15 PROPOSED
BEGINNING BALANCE	143,476,764	128,465,886	195,057,457	214,764,108	207,303,973
REVENUE					
Base Revenue	629,950,863	636,221,871	653,980,519	653,980,519	653,700,521
Power Supply Revenue	422,809,654	455,275,095	470,475,674	473,436,614	512,020,482
Community Benefit Revenue	0	36,320,391	53,039,128	53,976,686	57,728,976
Regulatory Revenue	0	75,274,157	75,471,024	75,471,024	100,683,394
Transmission Revenue	63,433,659	63,333,472	62,213,766	64,919,428	74,193,664
Transmission Rider	18,426,975	283,305	300,000	300,000	150,000
Other Revenue	49,013,595	39,098,148	46,470,062	45,612,968	47,718,451
Interest Income	3,150,956	2,366,678	2,475,032	2,475,032	3,167,356
TOTAL REVENUE	1,186,785,702	1,308,173,117	1,364,425,205	1,370,172,271	1,449,362,844
TRANSFERS IN					
Conservation Rebates and Incentives Fund	0	853,291	0	0	0
Strategic Reserve Fund	24,750,000	10,900,000	0	0	0
TOTAL TRANSFERS IN	24,750,000	11,753,291	0	0	0
TOTAL AVAILABLE FUNDS	1,211,535,702	1,319,926,408	1,364,425,205	1,370,172,271	1,449,362,844
OPERATING REQUIREMENTS					
Power Supply	425,895,800	453,813,794	470,475,674	473,436,614	512,020,482
Recoverable Expenses	72,863,583	88,412,053	97,815,520	101,025,758	125,581,534
Non-Fuel Operations & Maintenance	203,198,200	223,409,129	235,199,175	240,385,913	275,383,609
Conservation	12,680,727	12,694,638	14,576,467	13,576,467	16,566,323
Conservation Rebates	16,701,991	22,569,294	26,649,598	25,649,598	23,953,221
Nuclear & Coal Plants Operating	88,518,252	94,334,368	109,930,132	107,075,000	92,604,390
Other Operating Expenses	7,200,234	18,936,801	7,151,267	17,040,649	17,919,332
TOTAL OPERATING REQUIREMENTS	827,058,847	814,170,077	961,797,833	978,189,999	1,064,029,491
OTHER REQUIREMENTS					
Accrued Payroll	563,325	339,239	760,130	760,130	627,190
ERS Supplemental Contribution	8,467,909	0	0	0	0
TOTAL OTHER REQUIREMENTS	9,031,234	339,239	760,130	760,130	627,190
SUBTOTAL BEFORE TRANSFERS OUT	836,090,081	914,509,316	962,557,963	978,950,129	1,064,656,681
DEBT SERVICE					
General Obligation Debt Service	170,605	155,041	154,374	150,366	149,300
Capital Lease	0	0	116,023	116,023	116,023
Debt Service (Principal and Interest)	166,875,268	130,772,349	136,841,809	136,841,809	119,698,000
TOTAL DEBT SERVICE	167,045,873	130,927,390	137,112,806	137,108,198	119,963,323
TRANSFERS OUT					
Electric Capital Improvement Program	76,490,000	68,835,000	83,846,580	83,846,580	67,787,565
General Fund	105,000,000	105,000,000	105,000,000	105,000,000	105,000,000
Strategic Reserve	0	0	0	30,000,000	44,000,000
Voluntary Utility Assistance Fund	0	0	0	0	600,000
Trunked Radio	299,758	311,703	328,471	328,471	282,961
Workers' Compensation	1,600,340	1,855,537	2,188,084	2,188,084	2,338,903
Liability Reserve	500,000	500,000	400,000	400,000	400,000
Administrative Support	16,990,270	18,364,843	21,002,536	21,002,536	20,132,282
Communication and Technology Management Fund	5,181,640	5,839,411	7,037,555	7,037,555	5,985,656
Economic Incentives Reserve Fund	333,333	333,333	333,333	333,333	0
Economic Development Fund	9,522,313	11,294,237	11,437,520	11,437,520	8,388,453
TOTAL TRANSFERS OUT	215,917,654	212,334,064	231,574,079	261,574,079	254,915,820
TOTAL REQUIREMENTS	1,219,053,608	1,257,770,770	1,331,244,848	1,377,632,406	1,439,535,824
EXCESS (DEFICIENCY) OF TOTAL AVAILABLE FUNDS OVER TOTAL REQUIREMENTS	(7,517,906)	62,155,638	33,180,357	(7,460,135)	9,827,020
ADJUSTMENT TO GAAP	(7,492,972)	24,142,584	0	0	0
ENDING BALANCE	128,465,886	214,764,108	228,237,814	207,303,973	217,130,993

DSC by Cash payment		
	<b>#5</b>	
Total Rev	1,449,362,844	
Total O&M w/fuel	1,064,656,681	
Net available for Debt Service	384,706,163	
P&I Prior and Sub Lien	10,745,564	
Net Rev available for Sep Lien	373,960,599	<b>35.80</b>
P&I Sep Lien	96,175,718	
DSC on Sep Lien Obligations	<b>3.89</b>	

**#6** Debt Service Coverage Calculation for Austin Energy #6

Debt service coverage shall be targeted at a minimum of 2x.

Total FY15 Proposed Revenue		\$ 1,449,362,844
Less:		
Power Supply	\$ 512,020,482	
Recoverable Expenses	125,581,534	
Non-Fuel O&M	275,383,609	
Conservation	16,566,323	
Conservation Rebates & Incentives	23,953,221	
Nuclear & Coal Operating	92,604,390	
Other Operating Expenses	18,547,122	1,064,656,681
Net Revenue		384,706,163
FY15 Debt Service (Principal and Interest)	119,963,323	
Total Debt Service Requirement		119,963,323
Debt Service Coverage Ratio		3.21

**#7**

90,321,513 ST Debt due (from GAAP March 2014)

106,321,360 CP

**196,642,873** ST total

1,194,314,000 LT Debt # (from GAAP March 2014 includes CABs)

16.46%

#10

Proprietary Funds  
Statement of Net Position  
September 30, 2013  
(In thousands)

	Bual
<b>ASSETS</b>	
Current assets:	
Cash	\$ 21
Pooled investments and cash	119,210
Pooled investments and cash - restricted	90,888
Total pooled investments and cash	210,098
Investments, at fair value - restricted	66,945
Cash held by trustee - restricted	—
Working capital advances	5,115
Accounts receivable, net of allowance	175,031
Receivables from other governments-restricted	941
Due from other funds	814
Inventories, at cost	84,386
Deferred costs and expenses, net of amortization	17,036
Prepaid expenses	9,127
Other receivables - restricted	4,250
Other assets	32,954
Total current assets	606,718
Noncurrent assets:	
Cash - restricted	5,233
Pooled investments and cash - restricted	—
Advances to other funds	20,529
Advances to other funds - restricted	—
Investments, at fair value - restricted	115,975
Investments held by trustee - restricted	190,006
Interest receivable - restricted	886
Depreciable capital assets, net of accumulated depreciation	2,420,464
Nondepreciable capital assets	166,310
Derivative instruments - energy risk management	2,791
Other long-term assets	1,072
Deferred costs and expenses, net of amortization	235,737
Total noncurrent assets	3,159,003
Total assets	3,765,721
Deferred outflows of resources	\$ 55,354

The accompanying notes are an integral part of the financial statements.

Proprietary Funds  
Statement of Net Position  
September 30, 2013  
(In thousands)

	Bus
<b>LIABILITIES</b>	
Current liabilities:	
Accounts payable	\$ 63,911
Accounts and retainage payable from restricted assets	7,075
Accrued payroll	3,825
Accrued compensated absences	9,926
Claims payable	—
Due to other funds	—
Accrued interest payable from restricted assets	23,127
Interest payable on other debt	15
Bonds payable	—
Bonds payable from restricted assets	83,282
Capital lease obligations payable	44
Customer and escrow deposits payable from restricted assets	23,546
Accrued landfill closure and postclosure costs	—
Deferred credits and other liabilities	13,254
Other liabilities payable from restricted assets	—
Total current liabilities	228,005
Noncurrent liabilities, net of current portion:	
Accrued compensated absences	64
Claims payable	—
Advances from other funds	—
Advances from other funds payable from restricted assets	—
Capital appreciation bond interest payable	9,071
Commercial paper notes payable, net of discount	88,541
Bonds payable, net of discount and inclusive of premium	1,227,256
Pension obligation payable	28,877
Other post employment benefits payable	92,064
Capital lease obligations payable	1,132
Accrued landfill closure and postclosure costs	—
Decommissioning liability payable from restricted assets	179,123
Derivative instruments - energy risk management	55,377
Derivative instruments - interest rate swaps	—
Deferred credits and other liabilities	245,308
Other liabilities payable from restricted assets	—
Total noncurrent liabilities	1,926,813
Total liabilities	2,154,818
Deferred inflows of resources	\$ 2,783

The accompanying notes are an integral part of the financial statements.

Current Assets  
Inventory

606,716  
84,386

Current Liabilities

228005

Quick Ratio

2.290870814

	Actual 2013	Projected 2014	Forecast 2015
<b>CURRENT ASSETS:</b>			
Operating Funds	\$ 133,949,317	\$ 60,000,000	\$ 70,000,000
Investments	-	78,660,318	48,969,458
Total Operating Funds	\$ 133,949,317	\$ 138,660,318	\$ 118,969,458
60 Days O&M Less Fuel and Purchased Power	98,514,806	81,967,407	88,987,830



#11

Operating Funds - Days Cash on Hand

Total Begir \$	138,660,318
Total Endir	118,119,651
Average O	128,389,985
Less: Bonc	-
Available C	128,389,985

Non-Recov	426,427,475
Days Oper.	110

#13

	FY 12	FY 13	CYE		
Total Revenue	1,186,785,702	1,308,173,117		1,370,172,271	1,288,377,030
Less Fuel & Chiller Revenue	443,591,200	472,336,535		491,439,566	
Total Revenue for Calculation	743,194,502	835,836,582		878,732,705	819,254,596
					12%
					98,310,551.56 GFT Calculation
					Floor is
					\$105,000,000 per
					Council Directive

<b>\$000's CIP Spending Plan</b>		<b>FY2015</b>	
<b>Total BU Submittal</b>	<b>\$</b>		
<b>\$000's Funding Sources</b>		<b>FY2015</b>	<b>% of Total</b>
Beginning Cash Balance		32,500,807	12.8%
Carry Forward from Prior Year Unspent		-	
Transfers from Operating to CIP	\$	67,787,565	26.7%
Commercial Paper	\$	148,242,911	58.3%
Repair & Replacement Fund	\$	-	0.0%
Other (Strategic Reserve Fund)	\$	-	0.0%
Transfer from AWU, SWS, DU, TPD for CC&B			0.0%
Non Nuclear Decomm Fund (Prefunded)	\$	5,562,750	2.2%
<b>Total</b>	<b>\$</b>	<b>254,094,033</b>	<b>100%</b>

Equity

Equity

Debt

Equity

Debt 58.3%

Equity 41.7%

<b>AUSTIN ENERGY REPAIR AND REPLACEMENT FUND</b>					
	2011-12	2012-13	2013-14	2013-14	2014-15
	ACTUAL	ACTUAL	AMENDED	ESTIMATED	PROPOSED
BEGINNING BALANCE	64,071	64,071	64,071	64,071	64,071
TRANSFERS OUT					
Austin Energy	0	0	0	0	0
TOTAL TRANSFERS OUT	0	0	0	0	0
EXCESS (DEFICIENCY) OF TOTAL AVAILABLE FUNDS OVER					
TOTAL REQUIREMENTS	0	0	0	0	0
ENDING BALANCE	64,071	64,071	64,071	64,071	64,071

#16

## Austin Energy Strategic Reserve Fund

	2011-12	2012-13	2013-14	2013-14	2014-15
	ACTUAL	ACTUAL	AMENDED	ESTIMATED	PROPOSED
<b>BEGINNING BALANCE</b>	<b>137,330,059</b>	<b>113,017,320</b>	<b>102,117,320</b>	<b>103,953,476</b>	<b>133,953,476</b>
<b>TRANSFERS IN</b>					
Interest (1)	437,260	1,836,156	-	-	-
Austin Energy	-	-	-	30,000,000	44,000,000
<b>Total Transfers In</b>	<b>437,260</b>	<b>1,836,156</b>	<b>-</b>	<b>30,000,000</b>	<b>44,000,000</b>
<b>TOTAL AVAILABLE FUNDS</b>	<b>437,260</b>	<b>1,836,156</b>	<b>-</b>	<b>30,000,000</b>	<b>44,000,000</b>
<b>TRANSFERS OUT</b>					
Austin Energy Operating	24,750,000	10,900,000	-	-	-
<b>Total Transfers Out</b>	<b>24,750,000</b>	<b>10,900,000</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>TOTAL REQUIREMENTS</b>	<b>24,750,000</b>	<b>10,900,000</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>EXCESS (DEFICIENCY) OF TOTAL AVAILABLE FUNDS OVER TOTAL REQUIREMENTS</b>	<b>(24,312,740)</b>	<b>(9,063,844)</b>	<b>-</b>	<b>30,000,000</b>	<b>44,000,000</b>
<b>ADJUSTMENT TO GAAP (2)</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>ENDING BALANCE (2)</b>	<b>113,017,320</b>	<b>103,953,476</b>	<b>102,117,320</b>	<b>133,953,476</b>	<b>177,953,476</b>
Note 1: Interest earned on this fund is transferred directly to Austin Energy Operating Fund.					
Note 2: Ending balance represents the portfolio balance exclusive of GASB 31 adjustments.					

Target Balance: 60 Days of O&M less Fuel and Purchased Power	90,000,000	978,189,999
		473736614
Strategic Reserve Balance by September 30, 2015	177,953,476	504,453,385
		1,382,064
Emergency Reserve	60 days non-power supply operating requirements	(90,000,000)
		82,923,844.11
Contingency Reserve	60 days non-power supply operating requirements	(90,000,000)
		165,847,688.22
Balance		(2,046,524)
Rate Stabilization Reserve	Any funds over maximum 120 days available	-

# #18

## Notes to Basic Financial Statements September 30, 2013

## City of Austin, Texas (Continued)

### 13 – COMMITMENTS AND CONTINGENCIES, continued b – South Texas Project

Austin Energy is one of three participants in the South Texas Project (STP), which consists of two 1,250-megawatt nuclear generating units in Matagorda County, Texas. The other participants in the STP are NRG South Texas LP and City Public Service of San Antonio. In-service dates for STP were August 1988 for Unit 1 and June 1989 for Unit 2. Austin Energy's 16 percent ownership in the STP represents 400 megawatts of plant capacity. At September 30, 2013, Austin Energy's investment in the STP was approximately \$404 million, net of accumulated depreciation.

Effective November 17, 1997, the participation agreement among the owners of STP was amended and restated, and the STP Nuclear Operating Company (STPNOC), a Texas non-profit non-member corporation created by the participants, assumed responsibility as the licensed operator of STP. The participants share costs in proportion to ownership interests, including all liabilities and expenses of STPNOC. Each participant is responsible for its STP funding. The City's portion is financed through operations, revenue bonds, or commercial paper, which are repaid by Austin Energy (see Note 6). In addition, each participant has the obligation to finance any deficits that may occur.

Each participant appoints one member to the board of directors of STPNOC, as well as one other member to the management committee. A member of the management committee may serve on the board of directors in the absence of a board member. The City's portion of STP is classified as plant in service, construction in progress, and nuclear fuel inventory. Nuclear fuel includes fuel in the reactor as well as nuclear fuel in process.

STP requested a 20-year license extension for units 1 & 2 with the Nuclear Regulatory Commission (NRC). The current licenses expire in 2027 and 2028, respectively. The NRC decided to stop all licensing activities that rely on the Waste Confidence Decision and Rule until burial waste issues are resolved.

### c – South Texas Project Decommissioning

Austin Energy began collecting in rates and accumulating funds for decommissioning STP in 1989 in an external trust. The Decommissioning Trust assets are reported as restricted investments held by trustee. The related liability is reported as a decommissioning liability payable. Excess or unfunded liabilities related to decommissioning STP will be adjusted in future rates so that there are sufficient funds in place to pay for decommissioning. At September 30, 2013, the trust's assets were in excess of the estimated liability by \$18.8 million which is reported as part of deferred revenue and other liabilities (in thousands):

Decommissioning trust assets	\$ 186,477
Pro rata decommissioning liability	(167,632)
	<u>\$ 18,845</u>

STP is subject to regulation by the Nuclear Regulatory Commission (NRC). The NRC requires that each holder of a nuclear plant-operating license submit a certificate of financial assurance to the NRC for plant decommissioning every two years or upon transfer of ownership. The certificate provides reasonable assurance that sufficient funds are being accumulated to provide the minimum requirement for decommissioning mandated by the NRC. The most recent annual calculation of financial assurance filed on December 31, 2012, showed that the trust assets exceeded the minimum required assurance by \$25.6 million.

	October 2014	November 2014	December 2014	January 2015	February 2015	March 2015	April 2015	May 2015	June 2015	July 2015	Aug 2015	Sep 2015
Average projected cash balance	70,000,000.00	70,000,000.00	70,000,000.00	70,000,000.00	70,000,000.00	70,000,000.00	70,000,000.00	70,000,000.00	70,000,000.00	70,000,000.00	70,000,000.00	70,000,000.00
6 mo debt service	\$37,578,118.18	\$30,571,624.43	\$31,322,960.88	\$39,832,127.55	\$48,341,294.22	\$56,850,460.88	\$65,359,627.55	\$73,868,794.22	\$73,619,489.40	\$64,611,713.11	\$55,603,936.82	\$46,596,160.53
Over (Under)	32,421,881.83	39,428,375.58	38,677,039.12	30,167,872.45	21,658,705.78	13,149,539.12	4,640,372.45	(3,868,794.22)	(3,619,489.40)	5,388,286.89	14,396,063.18	23,403,839.47

Payment due Nov 15, 14

Prior Lien		
	\$3,344,094.00	\$557,349.00
Subordinate Lien		\$278,674.50
	\$2,505,723.98	\$417,620.66
Separate Lien		\$208,810.33
	\$69,107,340.05	\$11,517,890.01
		\$5,758,945.00

Payment due May 15' 15

Prior Lien								
	\$0.00	\$0.00						
Subordinate Lien								
	\$4,895,746.20	\$407,978.85	\$815,957.70	\$815,957.70	\$815,957.70	\$815,957.70	\$815,957.70	\$407,978.85
Separate Lien								
	\$27,068,377.55	\$2,255,698.13	\$4,511,396.26	\$4,511,396.26	\$4,511,396.26	\$4,511,396.26	\$4,511,396.26	\$2,255,698.13
Total								

Payment due Nov 15' 15

Oct	Nov	Dec	Jan	Feb	Total YTD
70,000,000.00	70,000,000.00	70,000,000.00	70,000,000.00	70,000,000.00	\$840,000,000.00
					\$3,344,094.00
					\$2,505,723.98
					\$69,107,340.05
					\$0.00
					\$0.00
					\$4,895,746.20
					\$27,068,377.55
					<u>\$183,228,312.69</u>
					\$17,636,691.34

# Austin Energy Fund

	2012-13 ACTUAL	2013-14 ACTUAL	2014-15 ESTIMATED	2014-15 AMENDED	2015-16 PROPOSED
<b>BEGINNING BALANCE</b>	128,465,886	214,764,108	274,985,273	253,718,538	268,081,018
<b>REVENUE</b>					
Base Revenue	636,221,871	634,464,672	653,140,477	653,700,521	658,594,897
Power Supply Revenue	455,275,095	501,593,156	508,373,008	512,537,152	484,964,333
Community Benefit Revenue	36,320,391	45,599,475	55,972,099	57,728,976	57,882,613
Regulatory Revenue	75,274,157	98,453,903	79,619,723	81,732,390	118,547,420
Transmission Revenue	63,333,472	68,974,261	74,193,664	74,193,664	73,751,931
Transmission Rider	283,305	575,375	150,000	150,000	0
Other Revenue	39,098,148	39,402,908	48,875,735	47,718,452	54,350,276
Interest Income	2,366,678	2,176,913	3,167,356	3,167,356	3,167,356
<b>Total Revenue</b>	<b>1,308,173,117</b>	<b>1,391,240,663</b>	<b>1,423,492,062</b>	<b>1,430,928,511</b>	<b>1,451,258,826</b>
<b>TRANSFERS IN</b>					
Conservation Rebates and Incentives Fund	853,291	0	0	0	0
Strategic Reserve Fund	10,900,000	0	0	0	0
<b>Total Transfers In</b>	<b>11,753,291</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL AVAILABLE FUNDS</b>	<b>1,319,926,408</b>	<b>1,391,240,663</b>	<b>1,423,492,062</b>	<b>1,430,928,511</b>	<b>1,451,258,826</b>
<b>PROGRAM REQUIREMENTS</b>					
Power Supply	453,813,794	501,593,156	508,373,008	512,537,152	484,964,333
Recoverable Expenses	88,412,053	113,221,998	125,581,534	125,581,534	124,950,969
Non-Fuel Operations & Maintenance	223,409,129	237,180,183	279,002,125	275,142,378	281,465,371
Conservation	12,694,638	12,940,926	16,703,849	16,807,554	15,626,609
Conservation Rebates	22,569,294	24,060,314	22,869,000	23,953,221	23,209,000
Nuclear & Coal Plants Operating	94,334,368	99,212,988	82,485,990	92,604,390	90,908,789
Other Operating Expenses	18,936,801	23,289,872	23,068,183	17,919,932	17,218,230
<b>Total Program Requirements</b>	<b>914,170,077</b>	<b>1,011,499,437</b>	<b>1,058,083,689</b>	<b>1,064,546,161</b>	<b>1,038,343,301</b>
<b>OTHER REQUIREMENTS</b>					
Accrued Payroll	339,239	527,699	265,912	627,190	1,420,667
<b>Total Other Requirements</b>	<b>339,239</b>	<b>527,699</b>	<b>265,912</b>	<b>627,190</b>	<b>1,420,667</b>
<b>DEBT SERVICE</b>					
General Obligation Debt Service	155,041	150,366	149,300	149,300	150,449
Capital Lease	0	123,888	125,209	116,023	125,209
Debt Service (Principal and Interest)	130,772,349	130,881,466	116,474,657	119,698,000	125,094,959
<b>Total Debt Service</b>	<b>130,927,390</b>	<b>131,155,720</b>	<b>116,749,166</b>	<b>119,963,323</b>	<b>125,370,617</b>
<b>TRANSFERS OUT</b>					
Electric Capital Improvement Program	68,835,000	79,846,580	67,787,565	67,787,565	64,624,113
General Fund	105,000,000	105,000,000	105,000,000	105,000,000	105,000,000
Strategic Reserve	0	0	44,000,000	44,000,000	36,000,000
Voluntary Utility Assistance Fund	0	600,000	600,000	600,000	600,000
Trunked Radio	311,703	328,471	282,961	282,961	366,816
Workers' Compensation	1,855,537	2,188,084	2,338,903	2,338,903	1,875,196
Liability Reserve	500,000	400,000	400,000	400,000	400,000
Support Services Fund	18,364,843	21,002,536	20,132,282	20,132,282	22,403,492
CTM Support	5,839,411	7,037,555	5,985,656	5,985,656	6,946,625
Economic Incentives Reserve Fund	333,333	333,333	0	0	0
Repair and Replacement Fund	0	0	0	0	9,000,000
Economic Development Fund	11,294,237	11,437,520	8,770,183	8,770,183	8,815,929
<b>Total Transfers Out</b>	<b>212,334,064</b>	<b>228,174,079</b>	<b>255,297,550</b>	<b>255,297,550</b>	<b>256,032,171</b>
<b>TOTAL REQUIREMENTS</b>	<b>1,257,770,770</b>	<b>1,371,356,935</b>	<b>1,430,396,317</b>	<b>1,440,434,224</b>	<b>1,421,166,756</b>
<b>EXCESS (DEFICIENCY) OF TOTAL AVAILABLE FUNDS OVER TOTAL REQUIREMENTS</b>	62,155,638	19,883,728	(6,904,255)	(9,505,713)	30,092,070
<b>ADJUSTMENT TO GAAP</b>	24,142,584	40,337,437	0	0	0
<b>ENDING BALANCE</b>	<b>214,764,108</b>	<b>274,985,273</b>	<b>268,081,018</b>	<b>244,212,825</b>	<b>298,173,088</b>

Note: Numbers may not add due to rounding.

TLSC 1-33. Since FY 2012 AE's non-nuclear decommissioning reserve has decreased from \$15,433,540 to \$8,138,077 in FY 2014. Please explain what happened to the approximate \$7,295,463 representing the monetary decline in the non-nuclear decommissioning reserve funding. (See App. I, P. 1-30, Bates Stamp p. 456.) In your explanation, please itemize the expenditures by categorical spending for each fiscal year.

**ANSWER:**

The audited balances of the reserve are \$15,093,817 at FY12 and \$8,138,072 at FY14. See below for the expenses and funding of the reserve in FY13 and FY14. All funding and expenditures are associated with the Holly Power Plant.

<b>Expenses by Object Code</b>	<b>2013</b>	<b>2014</b>	<b>Total</b>
5560 Services-construction	\$5,460,216.00	\$1,431,816.00	\$6,892,032.00
5590 Services-engineering	\$1,181,386.92	\$1,517,355.92	\$2,698,742.84
6203 Interdepartmental Charges	\$961,820.44	\$402,337.95	\$1,364,158.39
6236 Interdeptl-PW CPM charges	\$249.62	\$562.32	\$811.94
<b>Grand Total</b>	<b>\$7,603,672.98</b>	<b>\$3,352,072.19</b>	<b>\$10,955,745.17</b>
Decomm Expenses	(\$7,603,672.98)	(\$3,352,072.19)	(\$10,955,745.17)
Funding	\$4,000,000.00	\$0	\$4,000,000.00
<b>Net change in Decomm</b>	<b>(\$3,603,672.98)</b>	<b>(\$3,352,072.19)</b>	<b>(\$6,955,745.17)</b>

Prepared by: SK  
Sponsored by: Mark Dombroski



TLSC 1-34. Please provide the level of non-nuclear decommissioning reserve for FY 2015, audited if available; unaudited, if unavailable.

ANSWER:

As of the end of FY 2015, the unaudited non-nuclear decommissioning reserve is \$7,791,978. This amount was dedicated to retirement of the Holly Power Plant.

Prepared by: SK  
Sponsored by: Mark Dombroski

TLSC 1-35. What level of funding did AE include in its non-nuclear decommissioning reserves in its FY 2016 operating budget approved by the Council.

ANSWER:

Austin Energy did not budget any additional funds for non-nuclear decommissioning in the FY 2016 operating budget.

Prepared by: DK  
Sponsored by: Mark Dombroski

TLSC 1-36. Please provide the amount of revenues AE transferred into the non-nuclear decommissioning reserves for FY 2009, for FY 2010, for FY 2011, for FY 2012, for FY 2013, FY 2014, and FY 2015.

ANSWER:

GAAP-based funding is below.

	FY 2011	FY 2012	FY 2013	FY 2015	Grand Total
Total Transfers	\$5,500,000	\$3,000,000	\$4,000,000	\$1,600,000	\$14,100,000

There was no funding in FY 2014.

Prepared by: SK  
Sponsored by: Mark Dombroski